PDC97-036

Permit File Number / Parent Number

CP79-021

Address

0 MONROE ST S

Location

South east corner of S Winchester
Blvd and Stevens Creek Blvd
(Town and Country Center)

Approval Date

6/30/98

PD Zoning File Number

Tracking APN

27736003

Doc Type

Environmental Review

Sub Doc Type

City of San Jose - PBCE -
PLANNING Division
Imaging Index Cover Sheet

Address/Location: ____________________

Permit/Project No.: PDC 97-036 Vol. I - IV

Issuance Date: ____________ **Closed By:** ____________

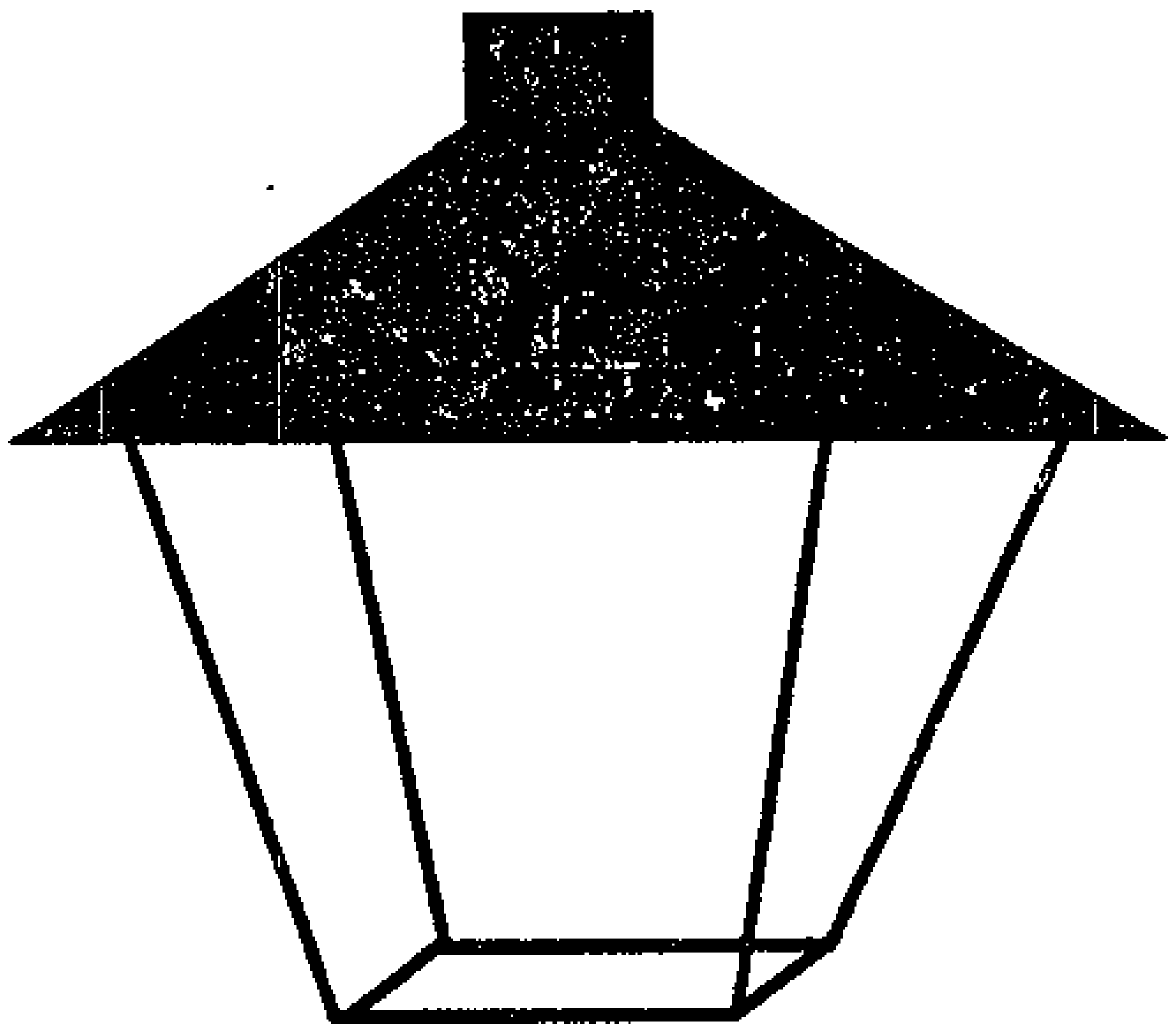
Category	Document Type	Sub Document Type
☒ Development Review	☐ Projects	☐ Zoning ☐ Permit ☐ Supporting Documents ☐ Plans
	☒ Environmental Review	☐ Approved Document ☒ EIR ☐ Supporting Documents ☐ Technical Reports
	☐ Adjustments	☐ Documents ☐ Plans

97-036

FINAL

ENVIRONMENTAL IMPACT REPORT

TOWN AND COUNTRY VILLAGE



CITY OF SAN JOSE

JUNE 1998 97-036

VOLUME I OF IV : EIR TEXT

PDCSH97-06-036

PREFACE TO THE FINAL ENVIRONMENTAL IMPACT REPORT

This document, consisting of three volumes, constitutes the Final Environmental Impact Report (FEIR) for the Town and Country Village project. As listed in the FEIR Table of Contents on the following page, Volume I of this FEIR consists of the Draft EIR (DEIR). Volume II and III of this FEIR consists of the Technical Appendices to the DEIR. Volume IV consists of the First Amendment to the DEIR including comments and responses to the DEIR, revisions to the text of the DEIR, responses to comments received during the public hearing at the Planning Commission meeting on April 22, 1998, the Planning Commission staff report and resolution certifying the EIR as complete, and the City Council Resolution certifying the EIR, and making the appropriate findings, and adopting the mitigation monitoring plan.

In conformance with the CEQA Guidelines, the FEIR provides objective information regarding the environmental consequences of the proposed project. The FEIR also examines mitigation measures and alternatives to the project intended to reduce or eliminate significant environmental impacts. The FEIR can be used by the City and other Responsible Agencies in making decisions regarding the project. The CEQA Guidelines require that, while the information in the FEIR does not control an agency's ultimate discretion on the project, the agency must respond to each significant of those significant effects. According to the State Public Resources Code Section 21081:

> ...no public agency shall approve or carry out a project for which an environmental impact report has been certified which identifies one or more significant effects on the environment that would occur if the project is approved or carried out unless both of the following occur:
>
> (a) The public agency makes one or more of the following findings with respect to significant effect:
>
> > (1) Changes or alternations have been required in, or incorporated into, the project which mitigate or avoid the significant effects on the environment.
> >
> > (2) The changes or alternations are within the responsibility and jurisdiction of another public agency and have been, or can and should be, adopted by that other agency.
> >
> > (3) Specific economic, legal, social, technological, other considerations, including considerations for the provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or alternatives identified in the environmental impact report.
>
> (b) With respect to significant effects which were subject to a findings under paragraph (e) of subdivision (a), the public agency finds that specific overriding economic, legal, social, technological, or other benefits of the project outweigh the significant effects on the environment.

The San Jose City Council did make such findings, including statements of overriding consideration, and the findings are included in the City Council Resolution found in Volume IV of the FEIR.

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CITY OF SAN JOSÉ, CALIFORNIA

DEPARTMENT OF PLANNING, BUILDING AND CODE ENFORCEMENT
801 NORTH FIRST STREET
SAN JOSE, CALIFORNIA 95110-1795

JAMES R. DERRYBERRY
DIRECTOR

January 8, 1998

Ladies and Gentlemen:

SUBJECT: TOWN AND COUNTRY VILLAGE DRAFT ENVIRONMENTAL IMPACT REPORT, FILE NO. PDCSH 97-06-036, SCH NO. 97072085

The Planning Commission of the City of San José will hold a Public Hearing to consider the Draft Environmental Impact Report (DEIR) prepared for the project described below. A copy of the DEIR is attached for your review.

Your comments regarding the significant environmental effects of this project and the adequacy of the DEIR are welcome. Written comments submitted to the Department of Planning, Building and Code Enforcement by February 25, 1998, will be included in the EIR and be considered by the Planning Commission at this Public Hearing. *If you make comments through a state or regional clearinghouse, please send a copy of your comments to the contact person listed below to insure prompt consideration.* If we receive no comments (nor a request for an extension of time) from you by the specified date, we will assume you have none to make.

Project Description and Location: Redevelopment of the existing Town and Country Village with a mixed use development to include 650,000 square feet of commercial/retail space, 1,200 residential units and two 100-room hotels. Town and Country is located at the southeasterly corner of Stevens Creek and Winchester Boulevards in the City of San Jose.

Tentative Hearing Date: March 25, 1998

Contact Person:

Julie Caporgno
Department of Planning, Building and Code Enforcement
801 North First Street
San José, CA 95110-1795

Sincerely,

James R. Derryberry, Director
Planning, Building and Code Enforcement

Deputy

97-036

PDC97-36.EIR/JC/PL/78AA/207-02

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CODE ENFORCEMENT (408) 277-4528

IMPLEMENTATION DIVISION (408) 277-4576
DIRECTOR OF PLANNING (408)277-4754

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PREFACE

This document has been prepared by the City of San Jose as the Lead Agency in conformance with the California Environmental Quality Act (CEQA). The purpose of this Environmental Impact Report (EIR) is to inform decision makers and the general public of the environmental effects of a proposed project.

In accordance with CEQA, an EIR provides objective information regarding the environmental consequences of the proposed project, both to the decision makers who will be considering and reviewing the proposed project, and to the general public. The purpose of this EIR is to evaluate the potential impacts which might result from approval of the redevelopment of the Town and Country Village site with a mixed use development.

The following guidelines are included in CEQA to clarify the role of an EIR:

> **§15121(a). Informational Document.** An EIR is an informational document which will inform public agency decision makers and the public of the significant environmental effects of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project. The public agency shall consider the information in the EIR, along with other information which may be presented to the agency.
>
> **§15151. Standards for Adequacy of an EIR.** An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enables them to make a decision which intelligently considers environmental consequences. An evaluation of the environmental effects of the proposed project need not be exhaustive, but the sufficiency of EIR is to be reviewed in light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection, but for adequacy, completeness, and a good-faith effort at full disclosure.

All documents referenced in this EIR are available for public review in the office of the Department of Planning, Building and Code Enforcement, 801 North First Street, Room 400, San Jose, California, on weekdays during normal business hours.

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SUMMARY

The proposed project is the redevelopment of a 39 acre site which will replace the existing 285,000 square foot Town and Country Village and, potentially, an existing car dealership with a mixed use development that could include up to a maximum of 650,000 square feet of commercial/retail space, 1,200 residential units, two 100 room hotels, and eight parking garages.

Following is a **brief summary** of project impacts and mitigation measures. Complete descriptions of the existing setting, impacts and mitigation measures can be found in the EIR text which follows.

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES
Land Use Impacts	
The project will not create significant land use impacts to existing surrounding land uses or be significantly impacted by existing surrounding land uses. **Less Than Significant Impact**	No mitigation is necessary or proposed.
Traffic Impacts	
Development of the project will increase the critical movement delay at an intersection already operating below LOS D by one percent during the AM peak hour on weekdays. **Significant Impact**	The project will improve the west leg of the intersection of Moorpark / Winchester to include the addition of a second exclusive left-turn and the conversion of the existing shared through-left-turn lane to an exclusive through lane. **Less Than Significant Impact With Mitigation**
The proposed project will increase critical movement delay by more than one percent in the PM peak hour on weekdays at an intersection already operating below LOS D. **Significant Impact**	Implementation of the mitigation proposed for Stevens Creek/Winchester will require improvements in the City of Santa Clara. The mitigation is therefore outside the jurisdiction of the City of San Jose to implement. **Significant Unavoidable Impact**
Project traffic will cause an intersection to deteriorate to LOS E in the Saturday peak hour. **Significant Impact**	The project will add a fourth eastbound through lane at Stevens Creek Boulevard and Monroe Street that transitions into a second southbound on-ramp to I-880. **Less Than Significant Impact With Mitigation**

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ENVIRONMENTAL IMPACTS	MITIGATION MEASURES
Traffic Impacts, Continued	
The project will not cause any regional intersection to deteriorate to LOS F during the PM peak hour, and does not add four seconds increased delay to any such intersection already at LOS F. **Less Than Significant Impact**	No mitigation is necessary or proposed.
Project traffic will add more than one percent of segment capacity to six freeway segments already anticipated to operate below LOS E. **Significant Impact**	Improvements to freeways would be infeasible for implementation by a single project **Significant Unavoidable Impact**
Air Quality Impacts	
The proposed project would not create any new exceedances of the 1-hour or 8-hour standards, nor would the project "contribute substantially to an existing or projected violation" of the standards. Thus, the project impacts on local carbon monoxide concentrations are considered to be less than significant. **Less Than Significant Impact**	No mitigation is necessary or proposed.
Total project emissions of regional pollutants exceed BAAQMD thresholds and would have a significant impact on regional air quality. **Significant Impact**	The project will implement site planning measures to encourage use of transit and other commute options. The mitigation will not reduce the impacts to a less than significant level. **Significant Unavoidable Impact**
Air quality impacts resulting from construction, particularly generation of construction dust, could cause significant adverse effects to the adjacent land uses. **Significant Impact**	The project will implement construction dust control measures to reduce generation of particulate to a less than significant level. **Less Than Significant Impact With Mitigation**

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Noise Impacts

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES
The project proposes commercial development on Stevens Creek Boulevard that would be exposed to exterior noise levels exceeding 60 dB LDN. Special building practices may be required to reduce the interior noise levels to 45 dB LDN or less. **Significant Impact**	Prior to approval of the PD Permits for specific building designs, a detailed acoustical analysis will be prepared and the recommendations for noise attenuation will be incorporated into the design of the commercial structures. **Less Than Significant Impact With Mitigation**
The proposed project includes multi-family residential development, commercial development, and a hotel on Winchester Boulevard would be exposed to exterior noise levels exceeding 60 dB LDN. Special building practices may be required to reduce the interior noise levels to 45 dB LDN or less. **Significant Impact**	Prior to approval of the PD Permits for specific building designs, a detailed acoustical analysis will be prepared and the recommendations for noise attenuation will be incorporated into the design of the commercial and residential structures proposed on the project site to reduce the interior noise levels to 45 dBA. Design features which could provide noise attenuation include sound rated windows, forced air mechanical ventilation so windows could be kept closed, and special building construction techniques such as insulation and soundproofing. **Less Than Significant Impact With Mitigation**
Construction of the project would create significant noise impacts on the adjacent residences and businesses. **Significant Impact**	The project will implement noise reduction techniques during construction, including use of proper mufflers, scheduling, and use of quieter equipment where appropriate. **Less Than Significant Impact With Mitigation**

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Soils and Geology Impacts

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES
Development of the project as proposed would not expose structures and occupants to significant seismic impacts that cannot be mitigated through standard engineering design. **Significant Impact**	A design level geotechnical investigation for the project site will be completed to address potential geologic hazards on the site. The geotechnical investigation for individual buildings will be completed prior to issuance of a Public Works Clearance. The investigation will include recommendations for proper foundation design, site preparation, and grading, which will be incorporated into project design. **Less Than Significant Impact With Mitigation**

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Hydrology Impacts

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES
The site is not located within the 100 year floodplain, therefore, the potential for flooding on the project site is unlikely. **Less Than Significant Impact**	No mitigation is proposed or required.
Development of the project site will increase the amount of storm water runoff from the site. There is adequate storm water capacity in the existing system to accommodate the increased volume of storm water. **Less Than Significant Impact**	No mitigation is proposed or required.
Development of the site would increase the amount of contamination of storm water runoff. **Significant Impact**	The project will implement regular site maintenance activities during construction, including sweeping the streets and on-site retention, to reduce potential contamination in storm runoff. The project will comply with NPDES General Construction Activity Storm Water Permit requirements, including preparation of a Storm Water Pollution Prevention Plan. As part of the mitigation for post-construction runoff impacts addressed in the SWPPP, the project will include post-construction best management practices such as swales or inlet filters, and will implement regular maintenance activities (i.e., sweeping, litter control) at the site to prevent soil, grease, and litter from accumulating on the project site and contamination surface runoff. **Less Than Significant Impact With Mitigation**

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ENVIRONMENTAL IMPACTS	MITIGATION MEASURES
Biological Impacts	
Development of the project site would not result in significant loss of wildlife habitat, and is unlikely to significantly impact any special status species. **Less Than Significant Impact**	No mitigation is proposed or required.
Should Burrowing Owls remain on the site, and/or breed there prior to the start of grading, individual birds and/or their eggs could be destroyed. **Significant Impact**	A pre-construction survey will be done for Burrowing Owls, in conformance with federal and state regulations for protection of raptors. Should Burrowing Owls be found on the property at that time, they will be relocated in conformance with federal and state requirements **Less Than Significant Impact With Mitigation**
Development of the site would result in the removal of 32 ordinance sized trees. **Significant Impact**	Any trees that are removed will be replaced in accordance with City standards and the City's Residential and Commercial Design Guidelines. **Less Than Significant Impact With Mitigation**
Hazardous Materials Impacts	
The extent of the potential environmental hazards identified on the Courtesy Chevrolet portion of the project site have not been determined and may create a health hazard, particularly if residential uses are developed on this portion of the site. **Significant Impact**	An environmental site assessment will be conducted on the Courtesy Chevrolet portion of the site prior to the issuance of a PD Permit for this portion of the site. The assessment will include remediation measures in conformance with local, state, and federal regulations. **Less Than Significant Impact With Mitigation**
Soil contamination on the project site would result in the exposure of future project residents to significant risks to human health and safety. **Significant Impact**	A site remediation plan will be followed which includes measures such as capping the contaminated soil and/or removing all or a portion or the contaminated soil. **Less Than Significant Impact With Mitigation**

Visual and Aesthetic Quality Impacts

Visual and aesthetic changes resulting from the development of the project as proposed would not constitute a significant environmental impact. **Less Than Significant Impact**	No mitigation is proposed or required.

Cultural Resources Impacts

Development of the proposed project may uncover buried archaeological or cultural resources. **Significant Impact**	In the event that an archaeological resource is found during construction, a mitigation program will be implemented in conformance with the standards described in Appendix K of the CEQA Guidelines. **Less Than Significant Impact With Mitigation**

Utilities and Service Systems Impacts

There may be insufficient downstream capacity within the existing sanitary sewer system to serve the proposed project. **Potentially Significant Impact**	Should adequate capacity in the existing sanitary sewer system not be available to serve the proposed project, the project would include improvements to the sewer system to maintain the level of service D standard within the system. **Less Than Significant Impact With Mitigation**

Cumulative Impacts

Project traffic will contribute to cumulatively significant impacts from pending development upon the levels of congestion on freeways, and on regional air quality. The project will also contribute incrementally to the regionally significant loss of Burrowing Owl habitat.

The following discussion summarizes the effects of the project upon existing urban services. Increased demand for these services may result in increased fiscal or social impacts, but will not result in significant environmental effects unless the project generates the need for new facilities to provide the services. This information is provided here because it may be useful in the decision-making process for this project.

Urban Services

The project will result in increased demands for some urban services. Development of the project will increase demand for fire, police, schools, and park resources; it is not anticipated that it will create the need for any new facilities.

SUMMARY OF ALTERNATIVES

CEQA requires that an EIR identify alternatives to a project as proposed. The CEQA Guidelines specify that the EIR identify alternatives which "would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project". The purpose of this section is to ascertain whether there are alternatives of design, scope or location which would substantially lessen the significant impacts. Those alternatives are summarized briefly below.

No Project: The No Project alternative is environmentally superior to the proposed project, since it avoids the impacts of the project. However, the No Project alternative would also not have the positive benefits anticipated from the project and would not meet the objectives of the project.

Reduced Scale Alternative: This alternative evaluated the possibility of having a lesser amount of development (approximately 25%). This alternative would result in similar traffic, air quality, noise, hydrology, biological, hazardous materials, and cultural resources impacts as the proposed project. This alternative is only slightly environmentally superior to the project as proposed. This alternative would meet the primary project objectives.

Remodel/Residential Alternative: This alternative would remodel the existing commercial center, with no expansion of area, and construct 250 dwelling units . This alternative would avoid all of the significant project impacts, although it would still contribute incrementally to cumulatively significant traffic, air quality and Burrowing Owl habitat loss. This alternative would be environmentally superior, but does not meet the project objectives.

I. DESCRIPTION OF THE PROJECT

A. OVERVIEW OF THE PROJECT

The proposed project is the redevelopment of a 39 acre site which will replace the existing 285,000 square foot Town and Country Village shopping center and, potentially, an existing car dealership with a mixed use development. The new development could include up to a maximum of 650,000 square feet of commercial/retail space, 1,200 residential units, two 100 room hotels, and five parking garage. The proposed project could have structures with a maximum building height of 90 feet.

B. PROJECT LOCATION

The project site is located on the southeasterly corner of the intersection of Stevens Creek Boulevard and Winchester Boulevard in the City of San Jose, as shown on the following Regional Location Map and Vicinity Map, Figures 1 and 2.

C. DESCRIPTION OF THE PROJECT

The project proposes rezoning the project site from C-3 to C-3(PD) to allow the redevelopment of the existing Town and Country Village with a mixed use development. The maximum development allowed by this proposed rezoning would be 650,000 square feet of commercial/retail space, 1,200 residential units, and two 100-room hotels. This amount of development would be distributed over the entire project site, as shown on the Conceptual Site Plan in Figure 4.

The amount of additional development that could replace the existing car dealership, should it be eliminated, has been limited to generate no more traffic than the amount of traffic currently generated by the car dealership as identified in Table 1.

Table 1
Proposed Land Use Intensity
Town and Country Village

	Residential Units	Commercial Square Footage	Hotel Rooms	Auto Dealership
Totals With Auto Dealership	**1,200**	**600,000**	**(2) 100**	**1**
Auto Dealership Equivalent	0	50,000	0	0
Totals Without Auto Dealership	**1,200**	**650,000**	**200**	**0**

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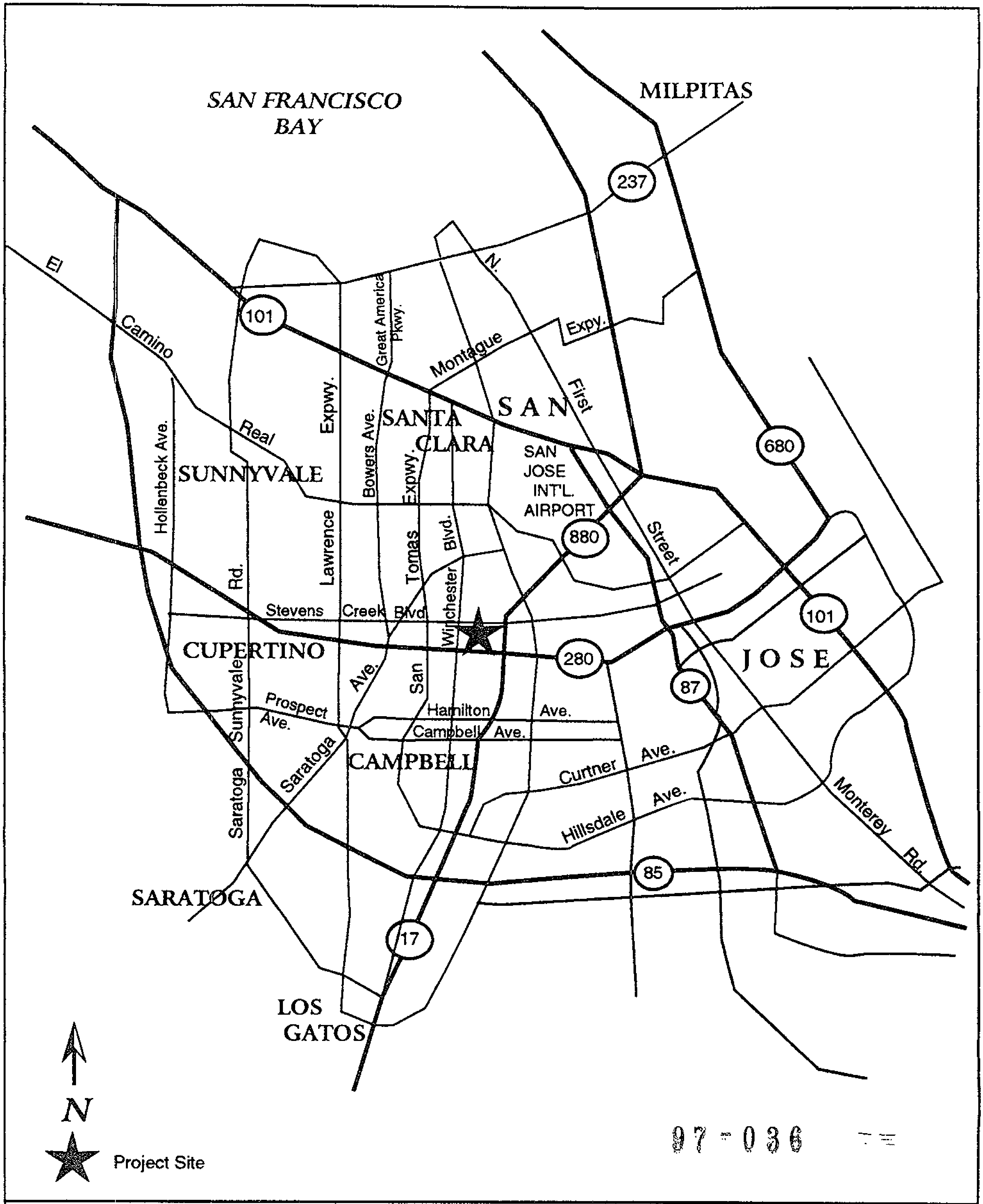

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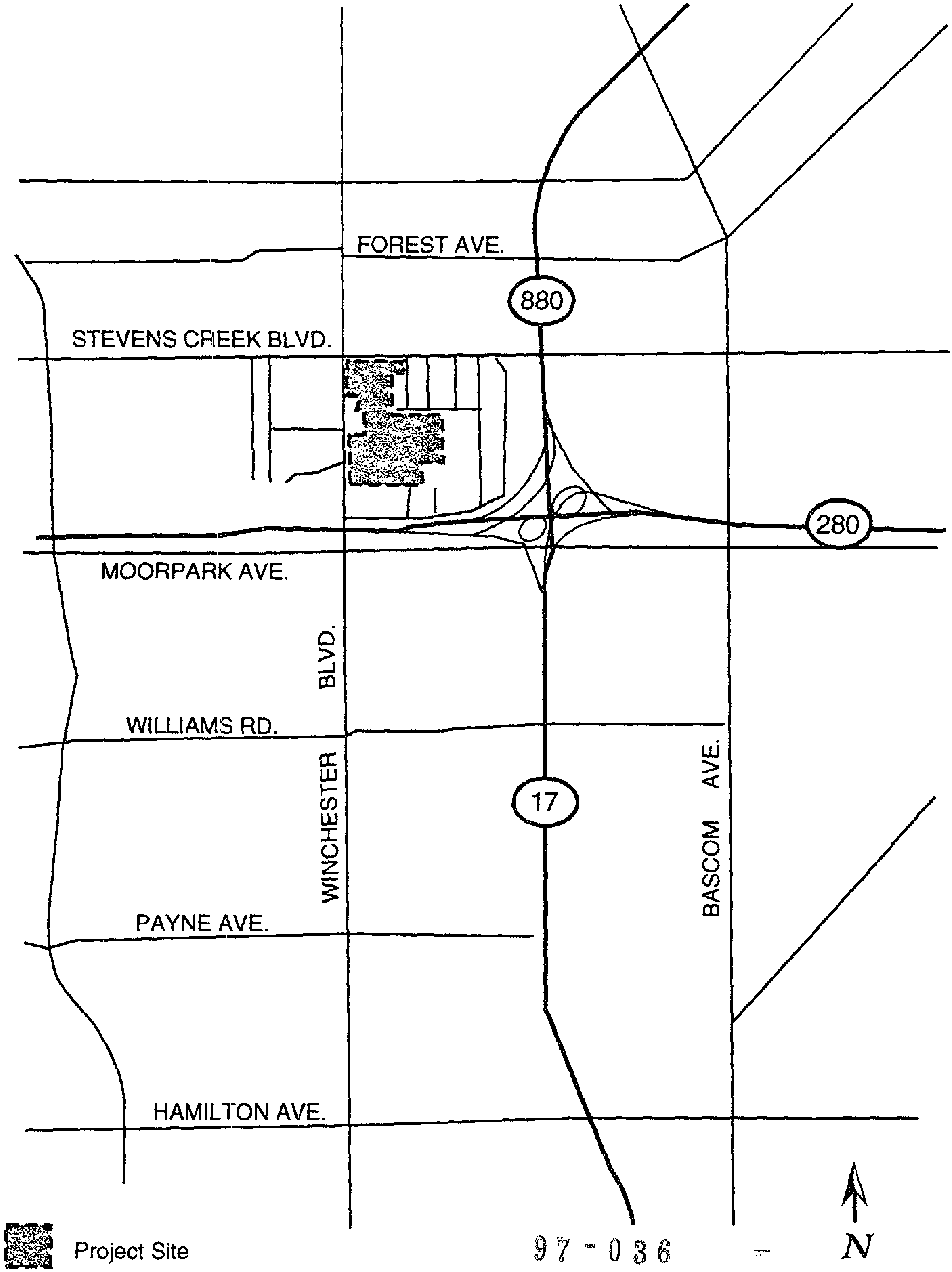
REGIONAL MAP FIGURE 1



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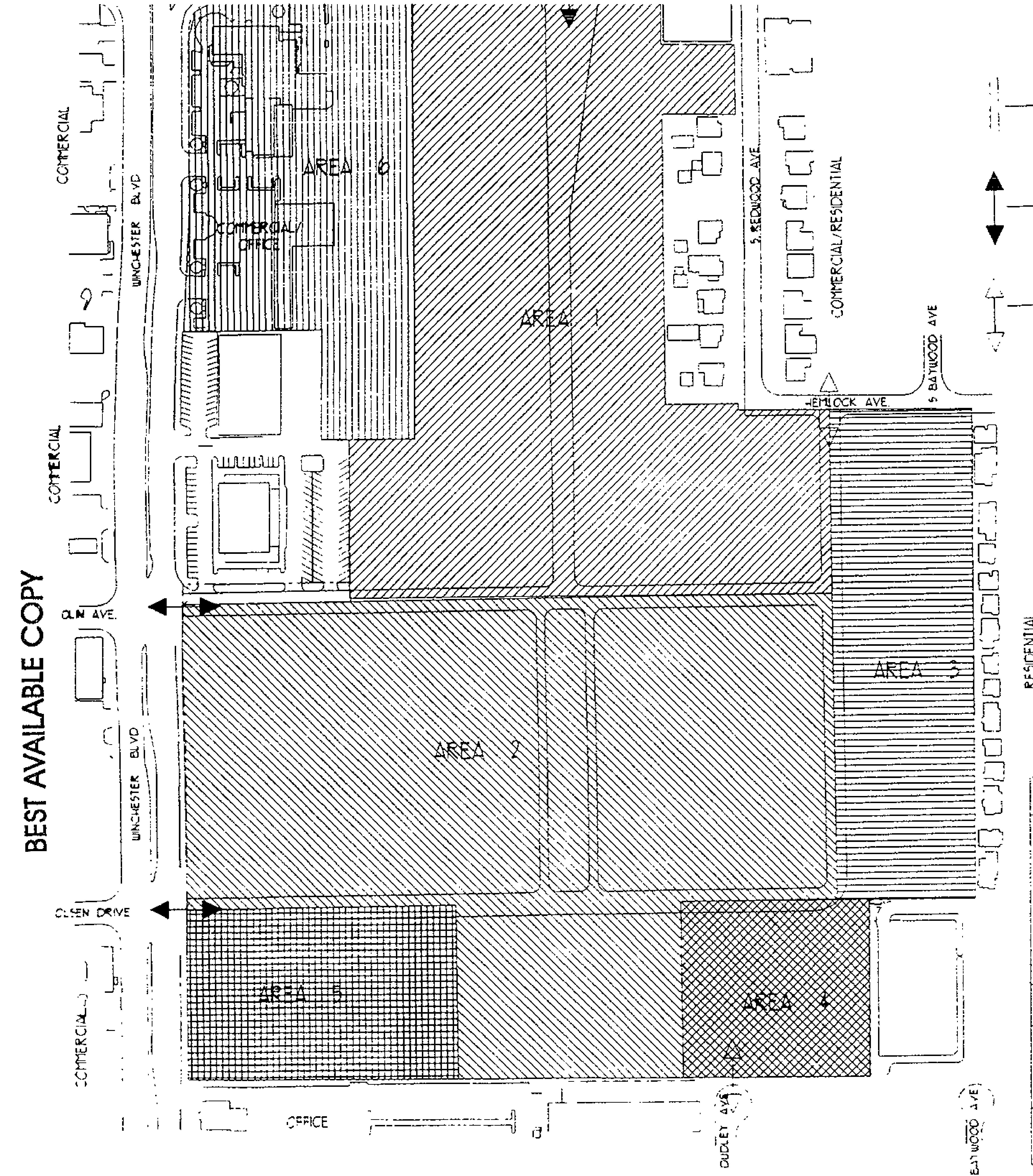
VICINITY MAP FIGURE 2



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EXISTING ZONING C-2 C-3

PROPOSED ZONING C-3 (PD

SITE AREA 38.8 ACRES GROSS
38.8 ACRES NET

PUBLIC R.O.W. 0.0 ACRES

MAX NO RESIDENTIAL UNITS 1200 DU

MAX NO HOTEL ROOMS 2-100 ROOM HOTELS

TOTAL COMMERCIAL FL. SPACE 650,000 SQ.FT

MAXIMUM OVERALL RES DENSITY 40 DU ACRE OVERALL AVERAGE

MAXIMUM COMMERCIAL SQ FT 650,000 GLA RETAIL (COMM.)

TOTAL PKG SPACES PROV 4,525 SPACES
LOADING SPACES PROV. 18 MINIMUM

DEVELOPMENT SCHEDULE

START FALL 1999

COMPLETION UNKNOWN

PROPOSED LAND USE PLAN - TOWN & COUNTRY

AREA	RESIDENTIAL (DWELLING UNITS)	SHOPPING CENTER (SQUARE FOOTAGE)	HOTEL (ROOMS)	AUTOMOBILE DEALERSHIP	PARKING SPACES
	200 - 300	200,000 - 300,000	100	0	200 - 1225
2	300 - 550	50,000 - 300,000	0	0	960 - 1038
3	25 - 150	0 - 50,000	0	0	268 - 537
4	75 - 150	0	0	0	94 - 188
5	75 - 90	10,000 - 40,000	100	0	234 - 461
6	0	0	0	1	0 *
MAX TOTALS WITH AUTO DEALERSHIP	1200	600,000	200	1	3300 - 4500 *
AUTO DEALERSHIP EQUIVALENT * *	0	50,000	0	0	225
TOTALS WITHOUT AUTO DEALERSHIP	1200	650,000	200	0	3500 - 4750

* DOES NOT INCLUDE AUTOMOBILE DEALERSHIP PARKING

* * UNUSED LANDUSES FROM SECTION 5 MAYBE TRANSFERED TO SECTION 6

LAND USE PLAN

FIGURE 3

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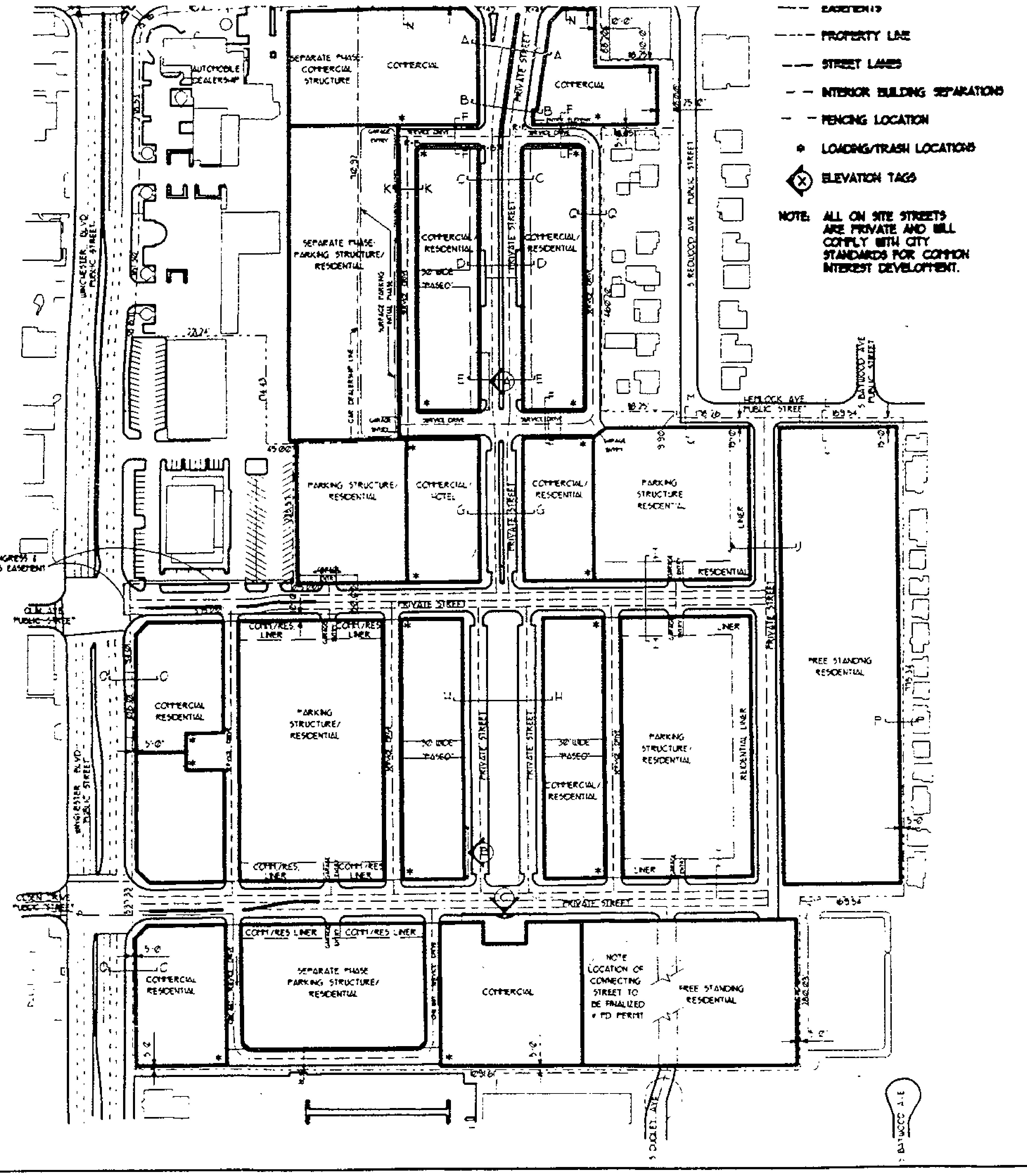
EASEMENTS
PROPERTY LINE
STREET LANES
INTERIOR BUILDING SEPARATIONS
FENCING LOCATION
LOADING/TRASH LOCATIONS
ELEVATION TAGS
NOTE: ALL ON SITE STREETS ARE PRIVATE AND WILL COMPLY WITH CITY STANDARDS FOR COMMON INTEREST DEVELOPMENT.
AUTOMOBILE DEALERSHIP
WINCHESTER BLVD PUBLIC STREET
SEPARATE PHASE COMMERCIAL STRUCTURE
COMMERCIAL
SEPARATE PHASE PARKING STRUCTURE/ RESIDENTIAL
SURFACE PARKING INITIAL PHASE
CAR DEALERSHIP LINE
GARAGE ENTRY
SERVICE DRIVE
PRIVATE STREET
COMMERCIAL/ RESIDENTIAL
30' WIDE "PASEO"
S REDWOOD AVE PUBLIC STREET
HEMLOCK AVE PUBLIC STREET
S BAYWOOD AVE PUBLIC STREET
PARKING STRUCTURE/ RESIDENTIAL
COMMERCIAL/ HOTEL
PARKING STRUCTURE RESIDENTIAL
LINER
RESIDENTIAL
RESIDENTIAL LINER
FREE STANDING RESIDENTIAL
30' INGRESS & EGRESS EASEMENT
ELM AVE PUBLIC STREET
OLSEN DRIVE PUBLIC STREET
COMM/RES LINER
NOTE LOCATION OF CONNECTING STREET TO BE FINALIZED @ PD PERMIT
S DUDLEY AVE
S BAYWOOD AVE
A
B
C
D
E
F
G
H
J
K
N
P
Q

USES

PERMITTED CONDITIONAL AND SPECIAL USES LISTED IN THE C-3 COMMERCIAL ZONING DISTRICT OF THE CITY OF SAN JOSE ZONING ORDINANCE

MAXIMUM FLOOR AREA

MAXIMUM FLOOR AREA OF THE COMMERCIAL SPACE IN AREAS 1,2,3,5 & 6 WILL BE 650,000 GROSS LEASABLE RETAIL AREA PLUS THAT AREA REQUIRED FOR TWO 100 ROOM HOTELS.

MAXIMUM HEIGHT:

MAXIMUM HEIGHT FOR AREAS 1,2,3,5 & 6 SHALL BE 30

MINIMUM SETBACKS

THE MINIMUM SETBACKS WILL BE CONSISTENT WITH THE C-3 ZONING DISTRICT

PROPOSED DEVELOPMENT STANDARDS: RESIDENTIAL

USES.

PERMITTED USES WITHIN AREAS 1,2,3,4,5 & 6 SHALL INCLUDE FOR-SALE RESIDENTIAL FLATS CONDOMINIUMS AND/OR TOWNHOUSES AS WELL AS RENTAL APARTMENTS FLATS OR TOWNHOUSES.

MAXIMUM FLOOR AREA

MAXIMUM FLOOR AREA OF THE RESIDENTIAL SPACE IN AREAS 1,3,4,5 & 6 WILL BE THAT AREA REQUIRED FOR UP TO 1200 RESIDENTIAL UNITS. THE DENSITY FOR THIS DEVELOPMENT WILL NOT EXCEED AN OVERALL SITE AVERAGE OF 40 UNITS ACRE

MAXIMUM HEIGHT:

MAXIMUM HEIGHT FOR AREAS 3 & 4 SHALL BE 30' AND/OR 3 STORIES

MINIMUM SETBACKS

SETBACKS FOR AREAS 1,3 & 4 WILL BE 25 FROM EXISTING STRUCTURES TO PROPOSED STRUCTURES AND 15' FROM THE PROPERTY LINE ALONG PUBLIC STREETS SEE ATTACHED CONCEPTUAL STREET PLANS & SECTIONS

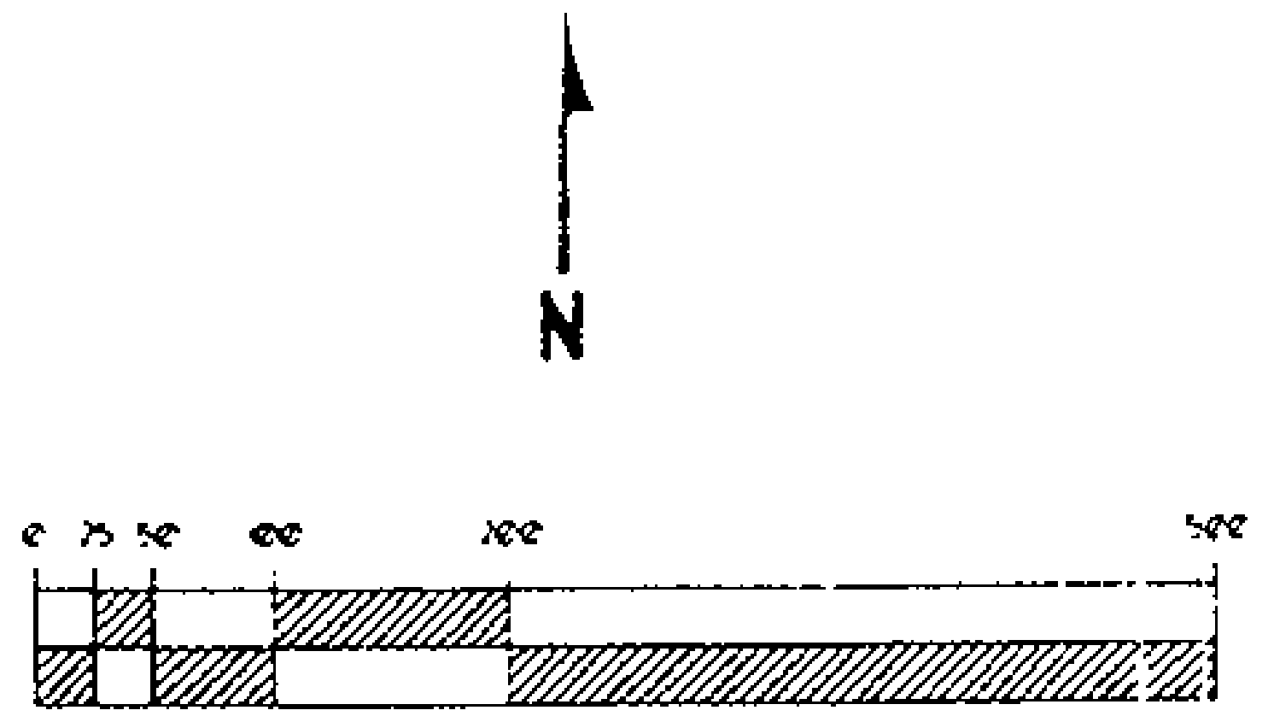

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FIGURE 4

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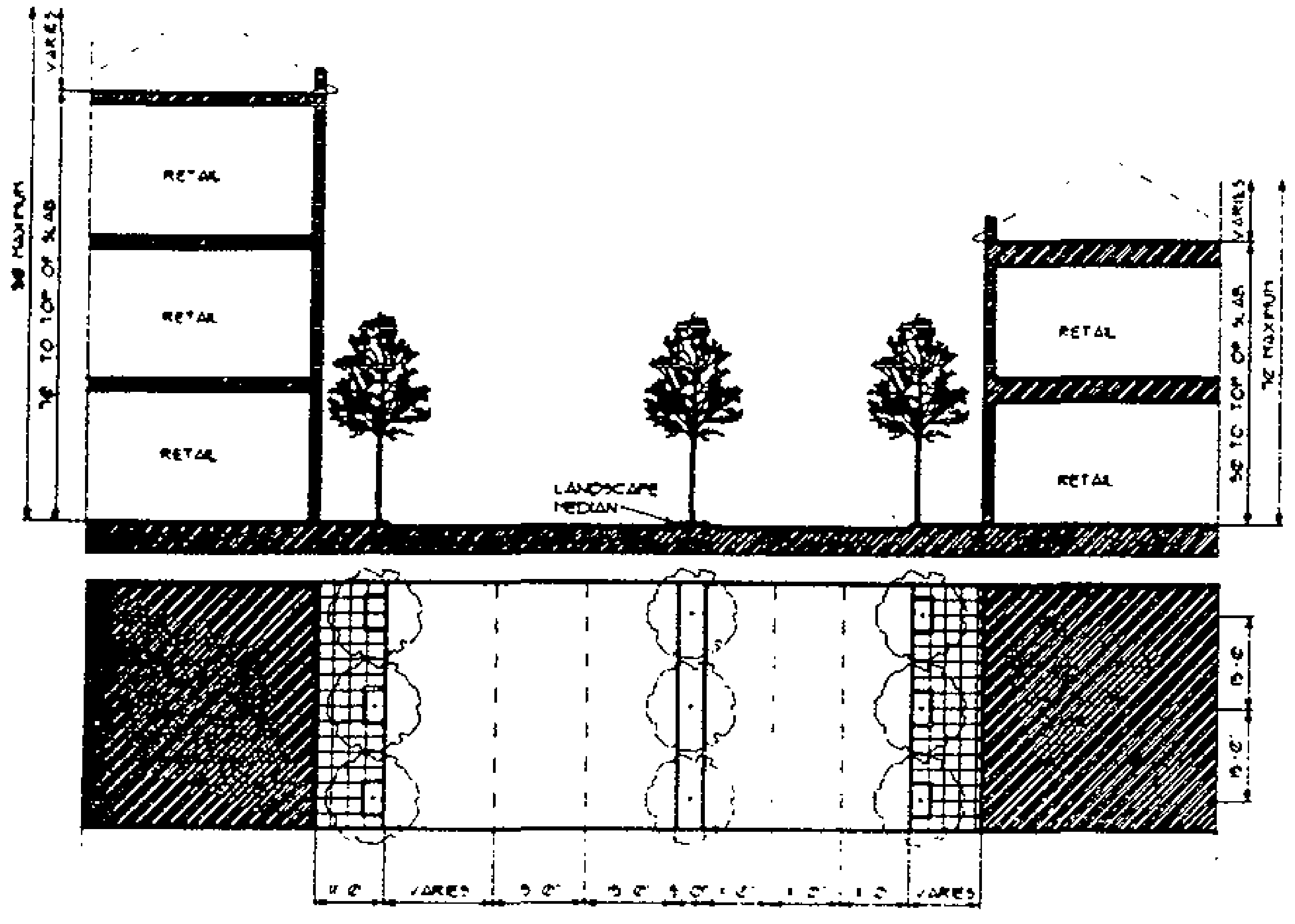
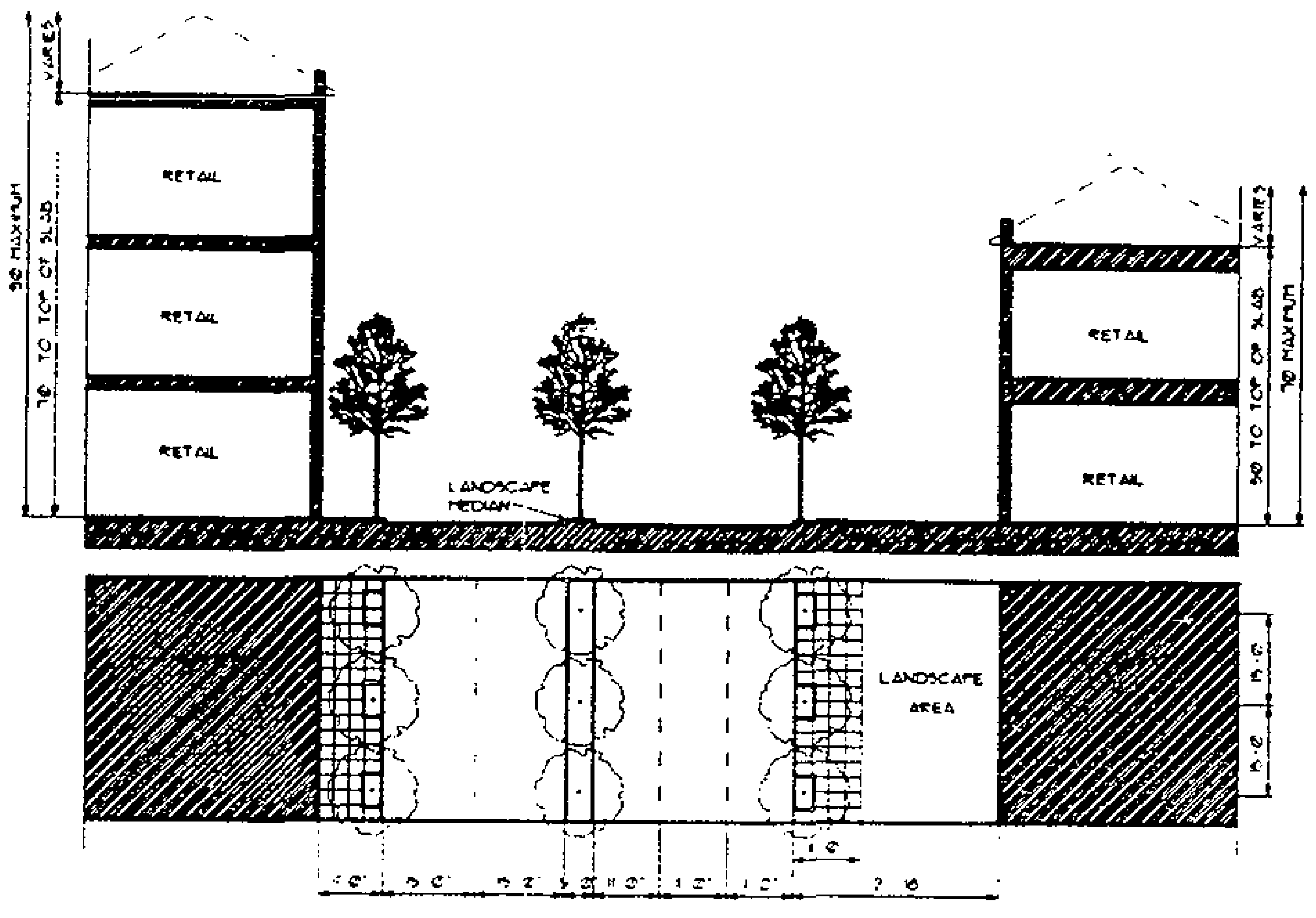
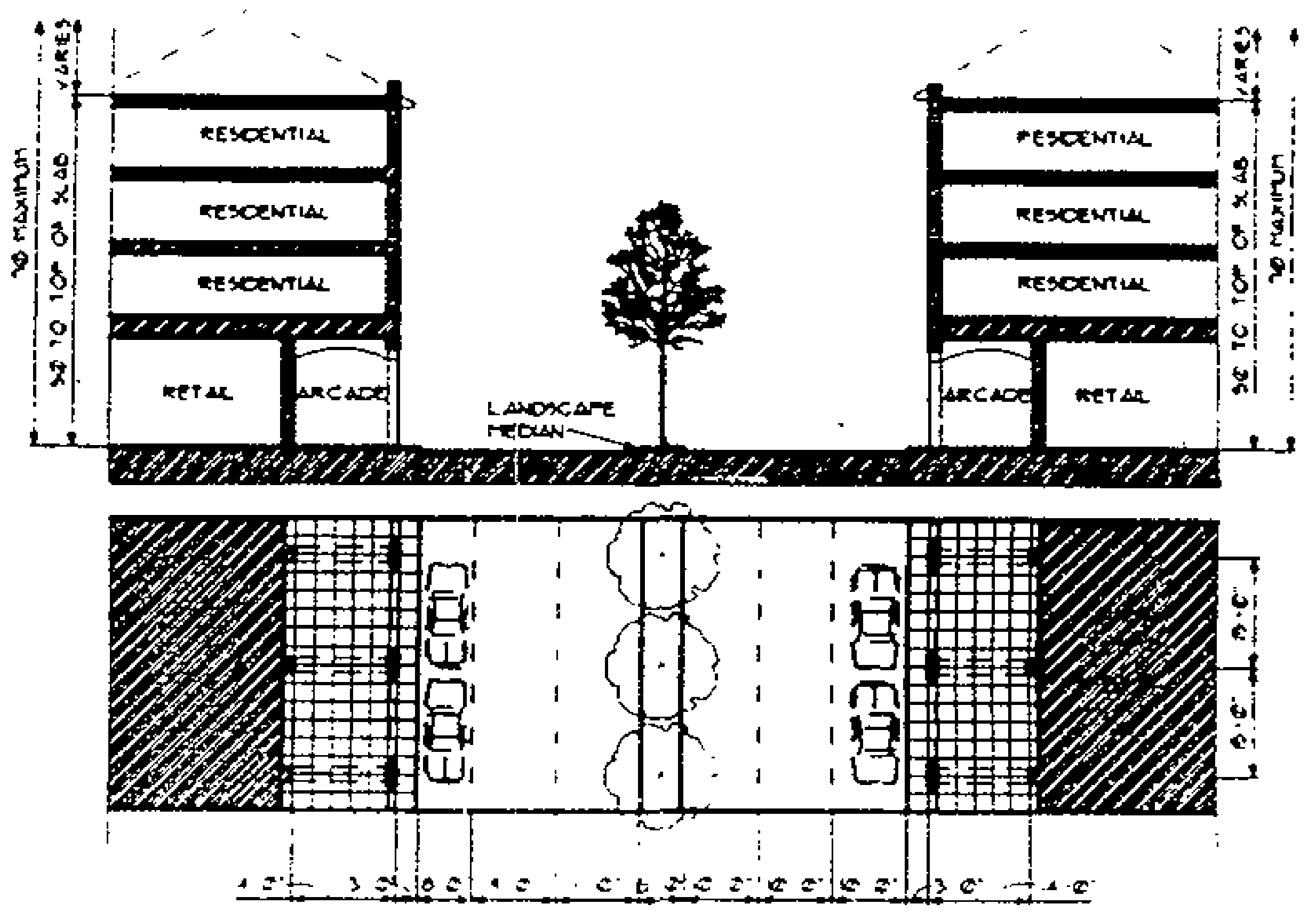


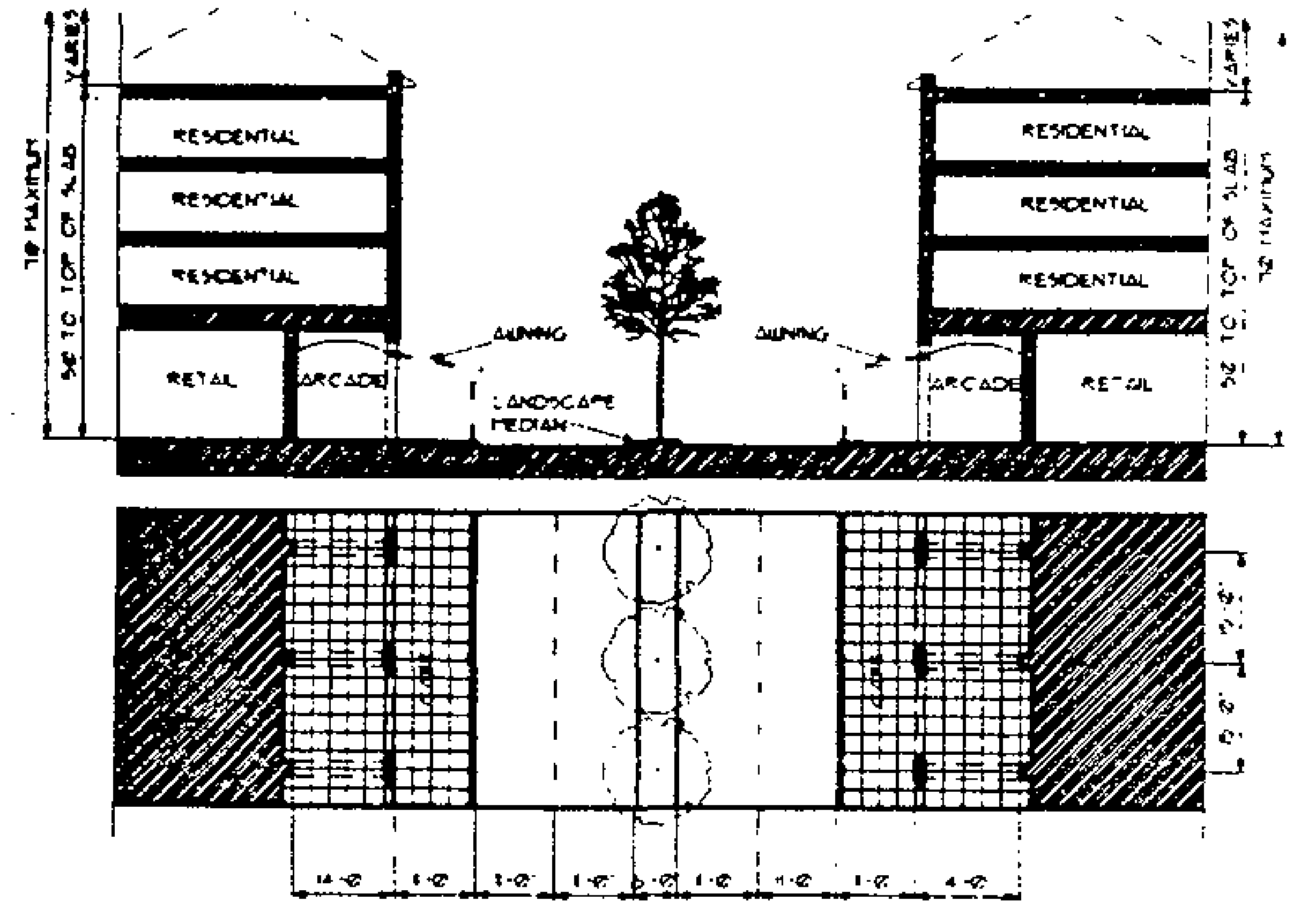
PLAN/SECTION - A



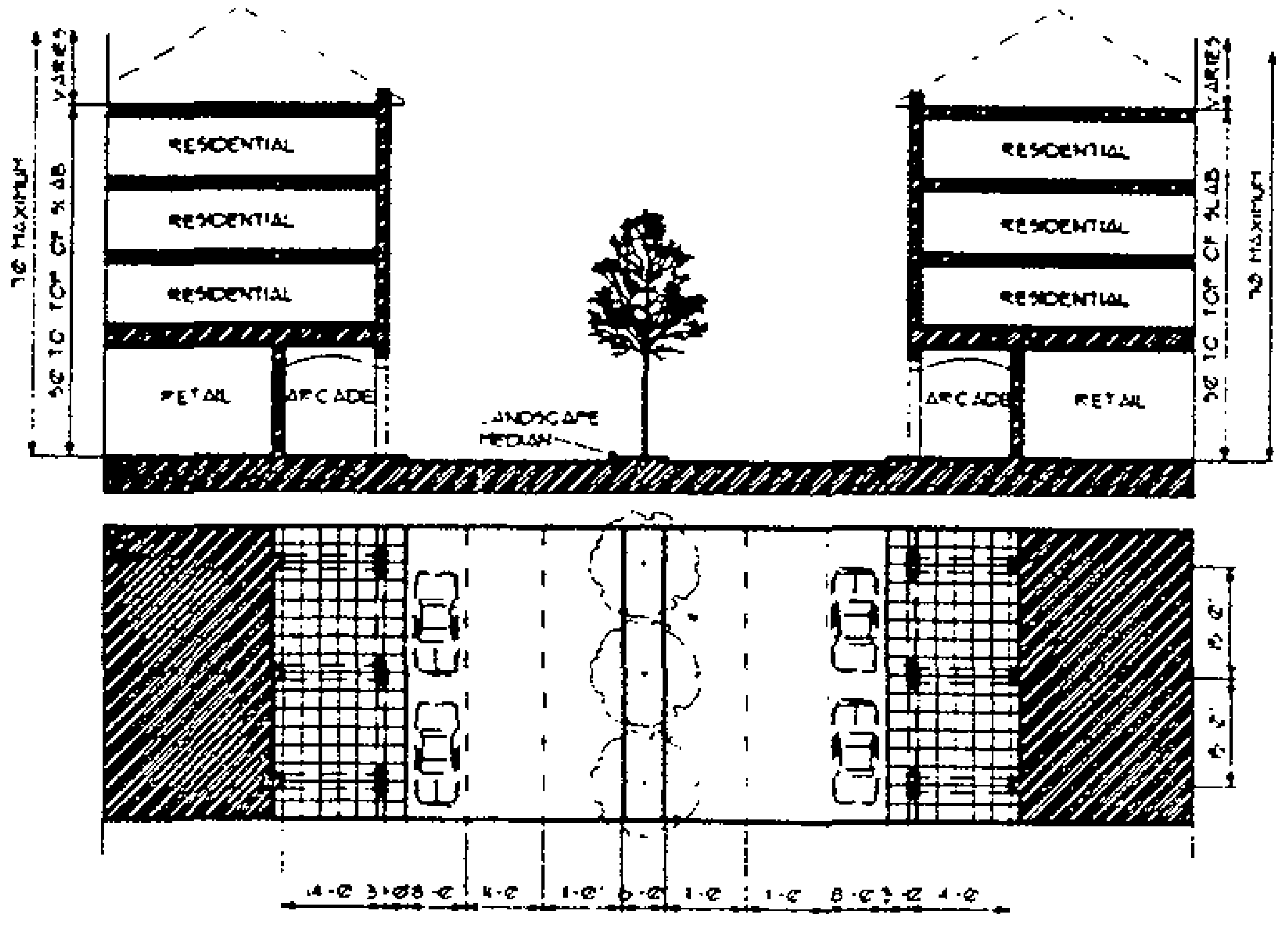
PLAN/SECTION - B
SCALE 1" = 20'



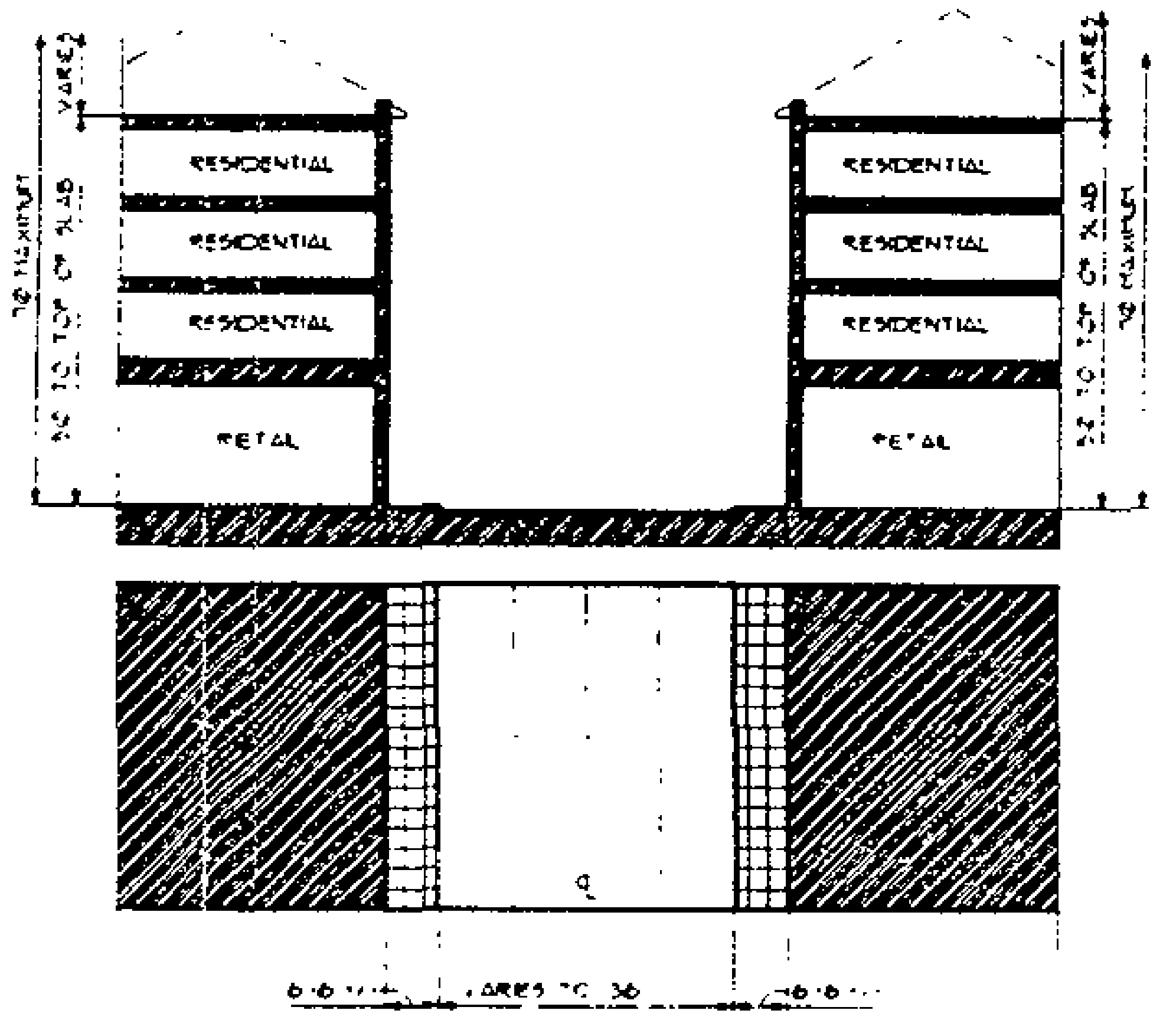
PLAN/SECTION - C



PLAN/SECTION - D
SCALE 1" = 20'



PLAN/SECTION - E
SCALE 1" = 20'



PLAN/SECTION - F
SCALE 1" = 20'

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CONCEPTUAL PLANS/SECTIONS

FIGURE

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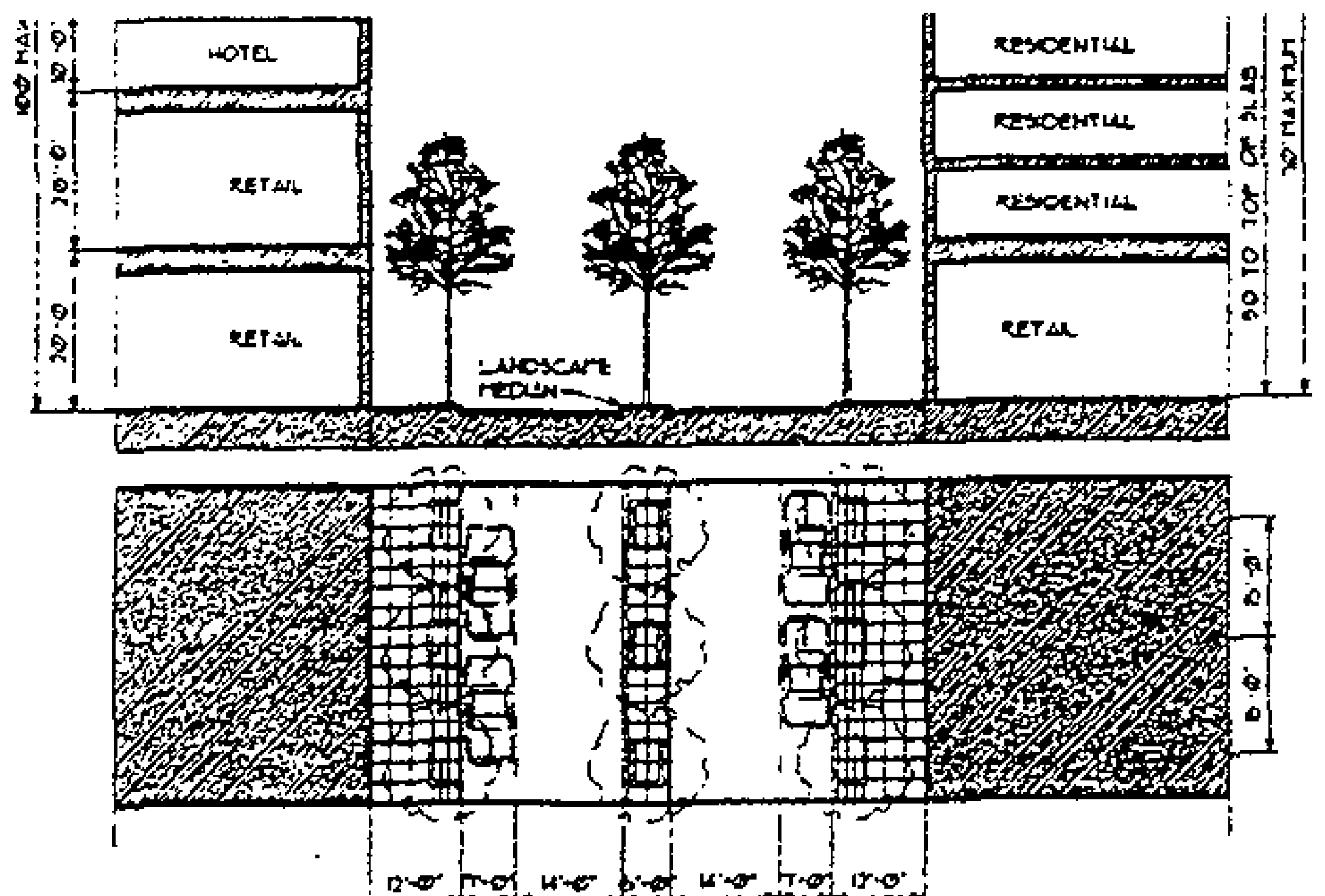
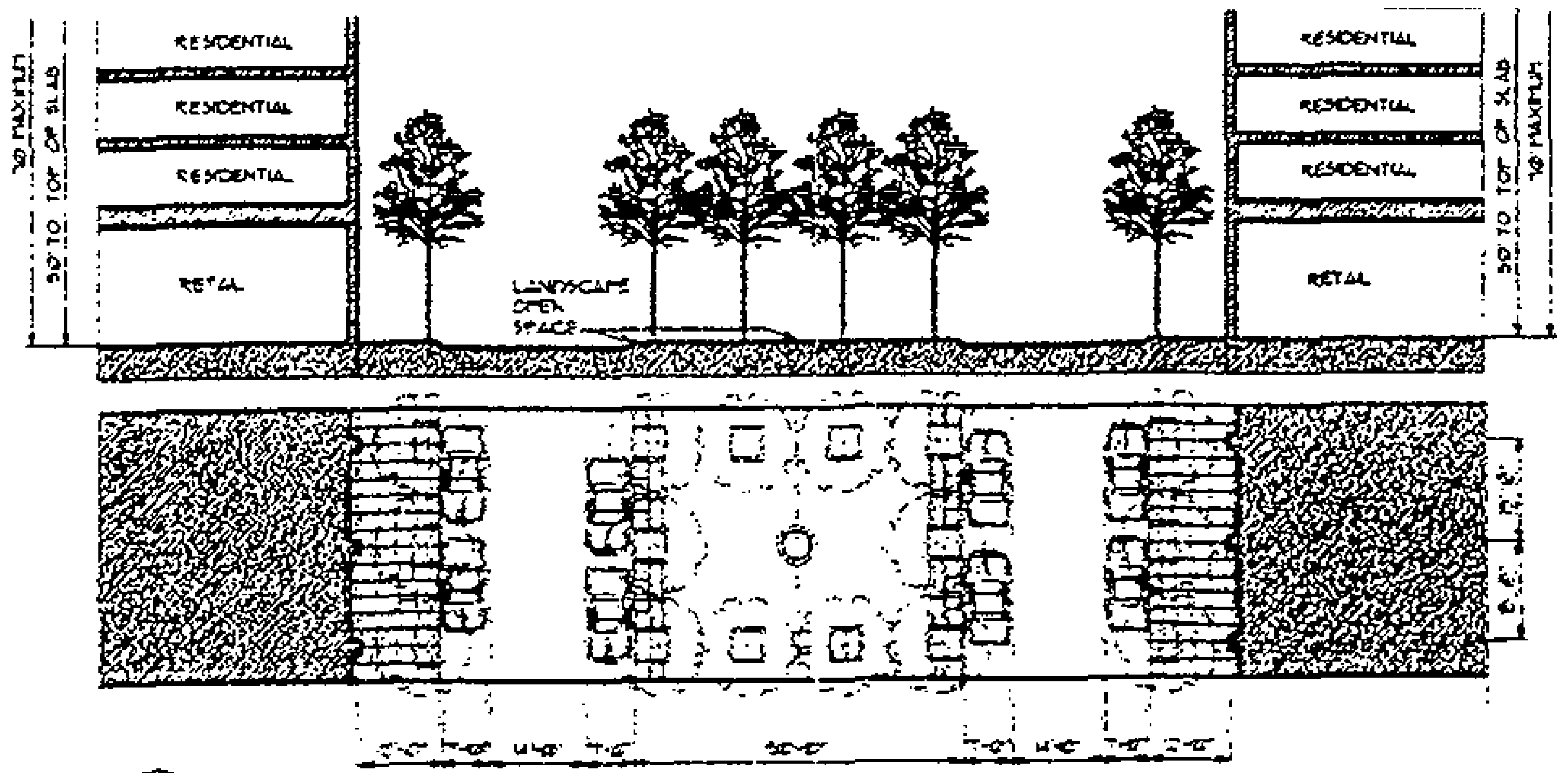
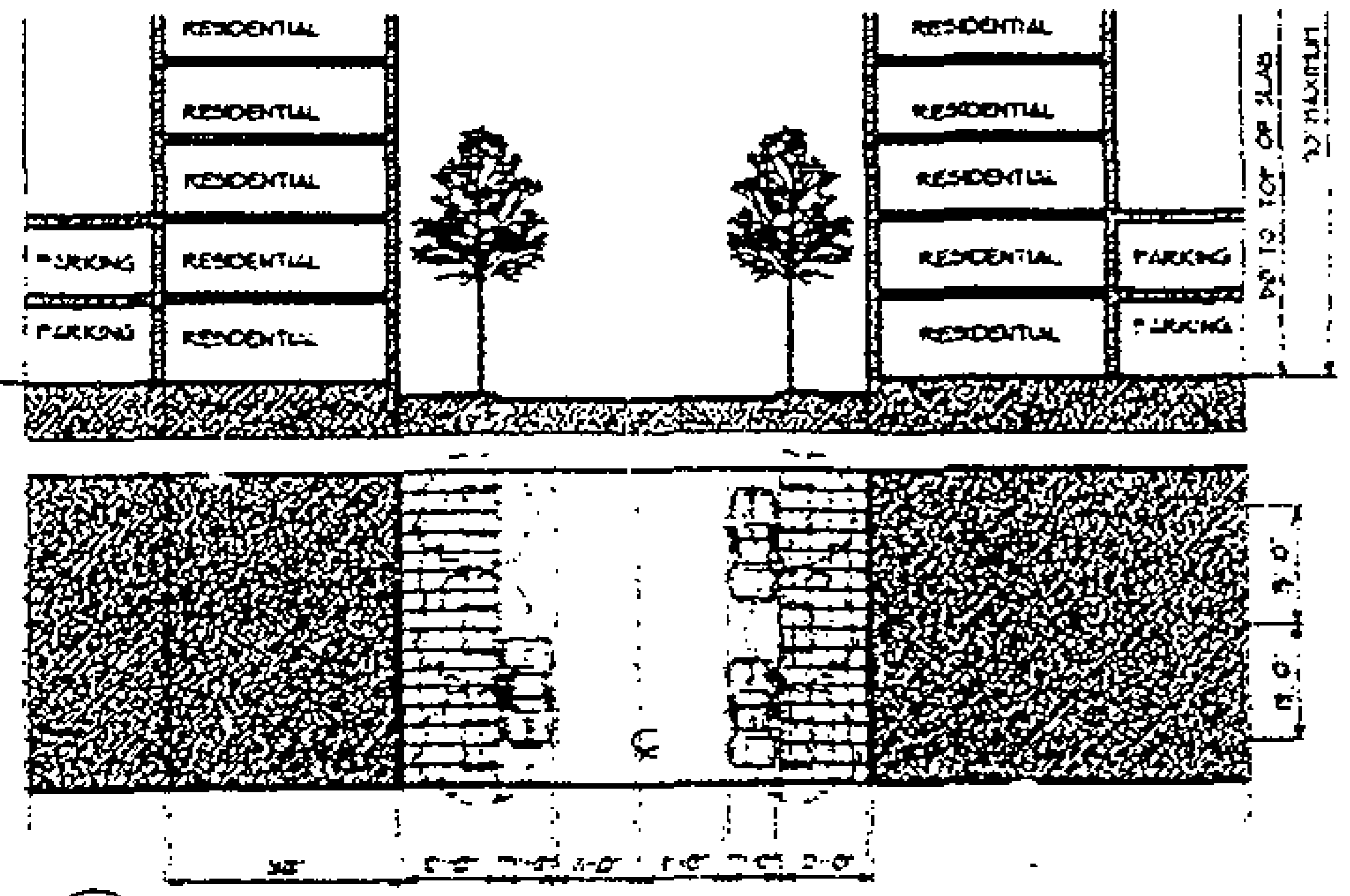


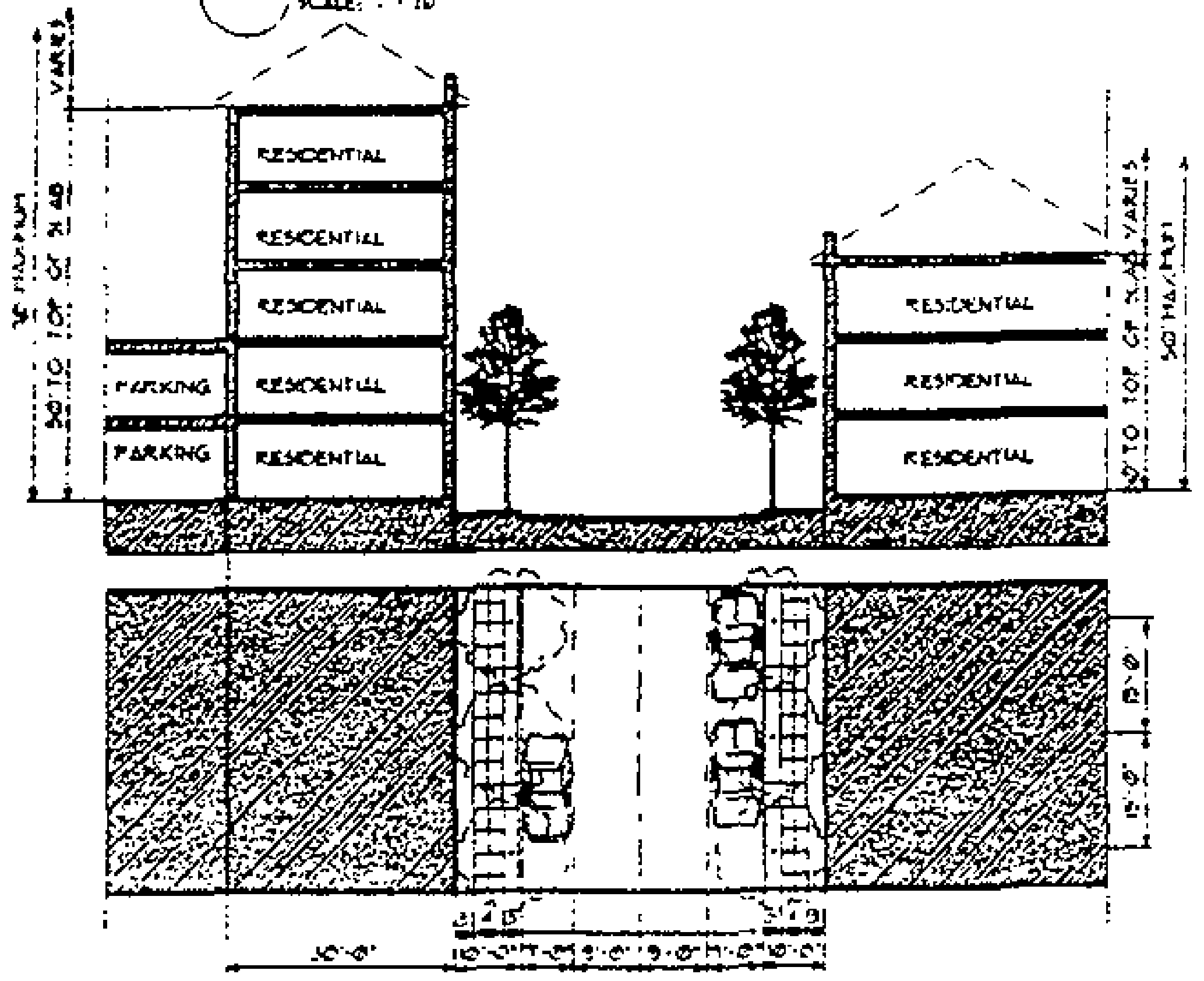
PLAN/SECTION - G
SCALE: 1" = 20'



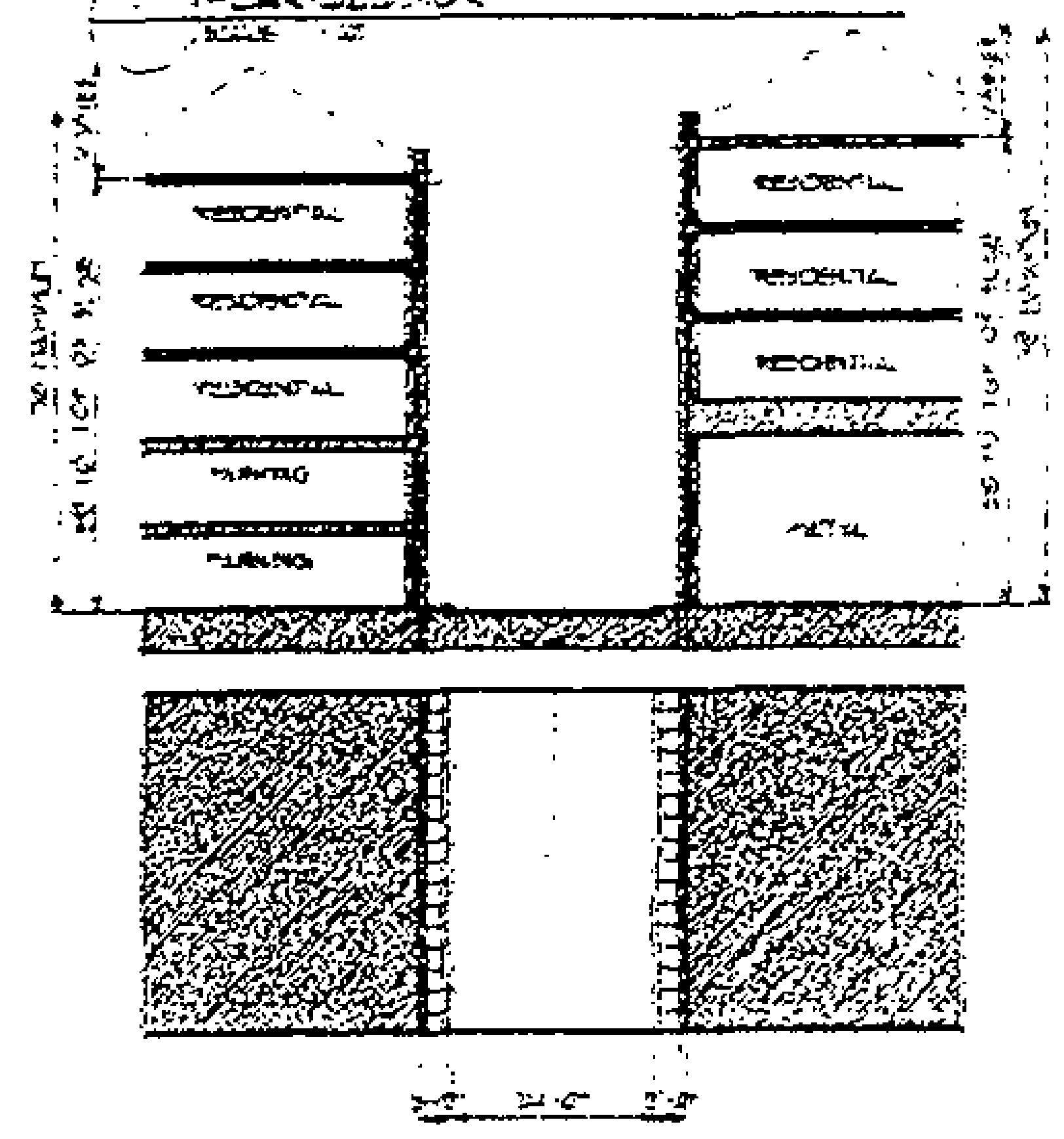
PLAN/SECTION - H
SCALE: 1" = 20'



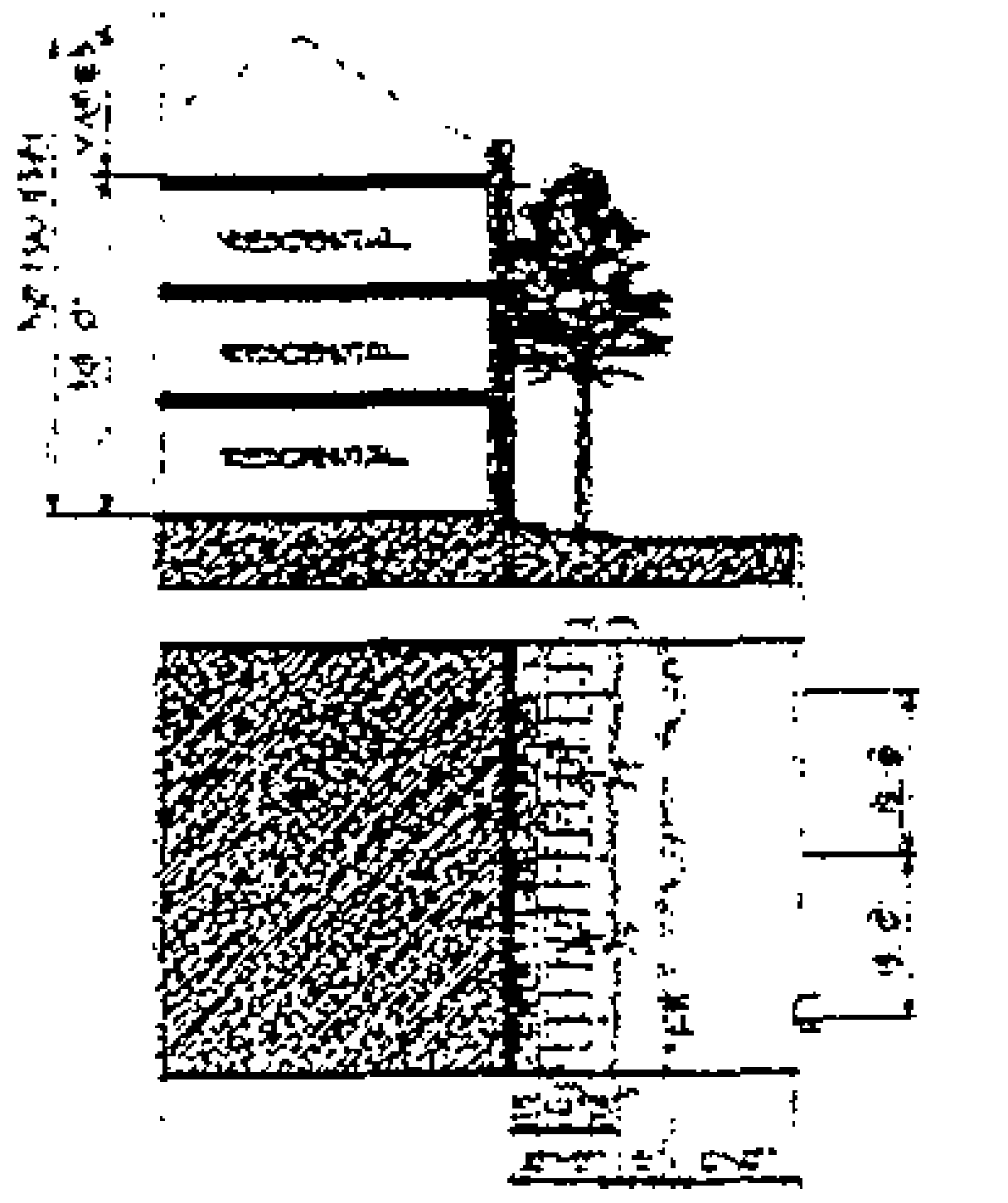
PLAN/SECTION - I
SCALE: 1" = 20'



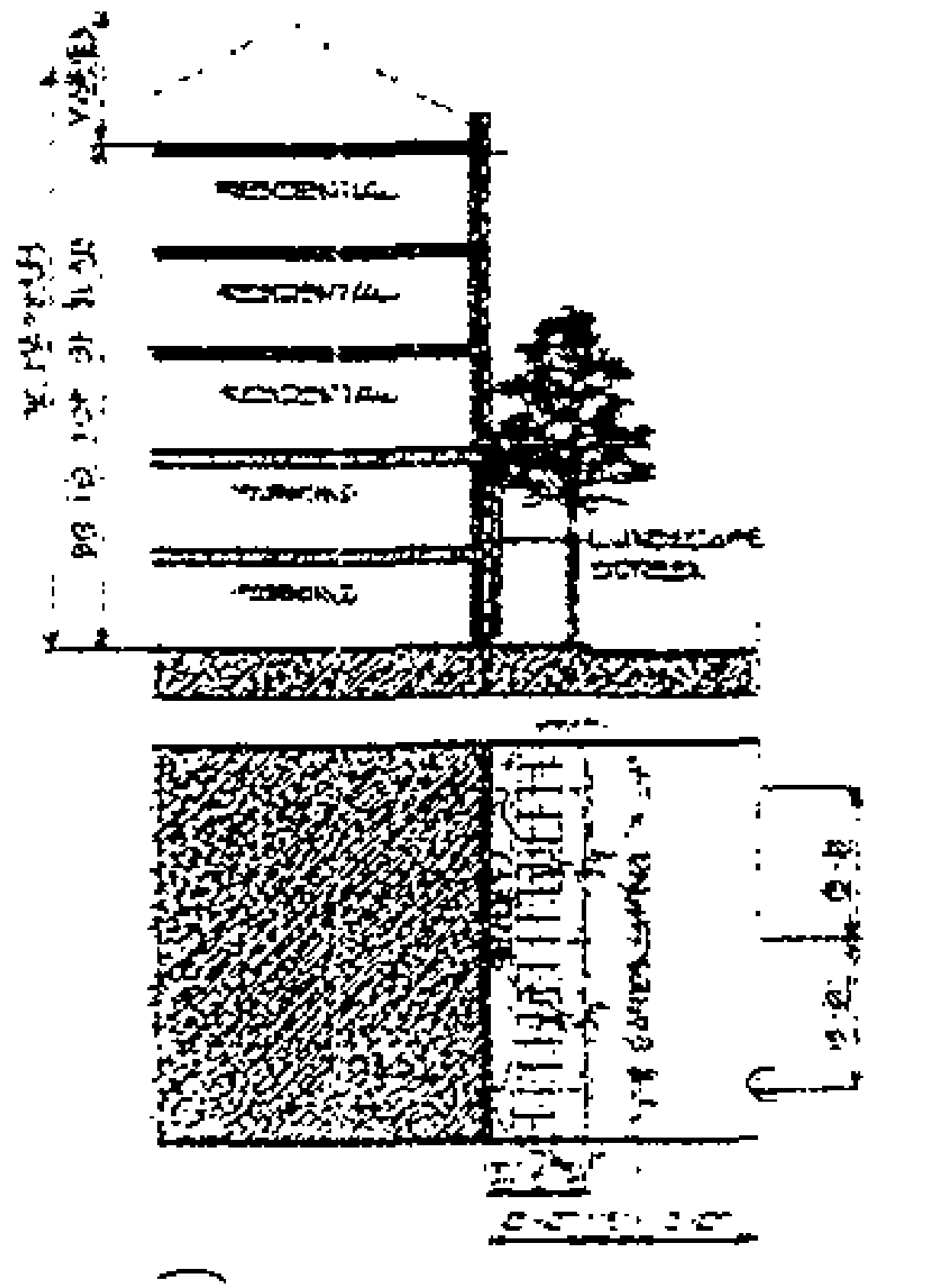
PLAN/SECTION - J
SCALE: 1" = 20'



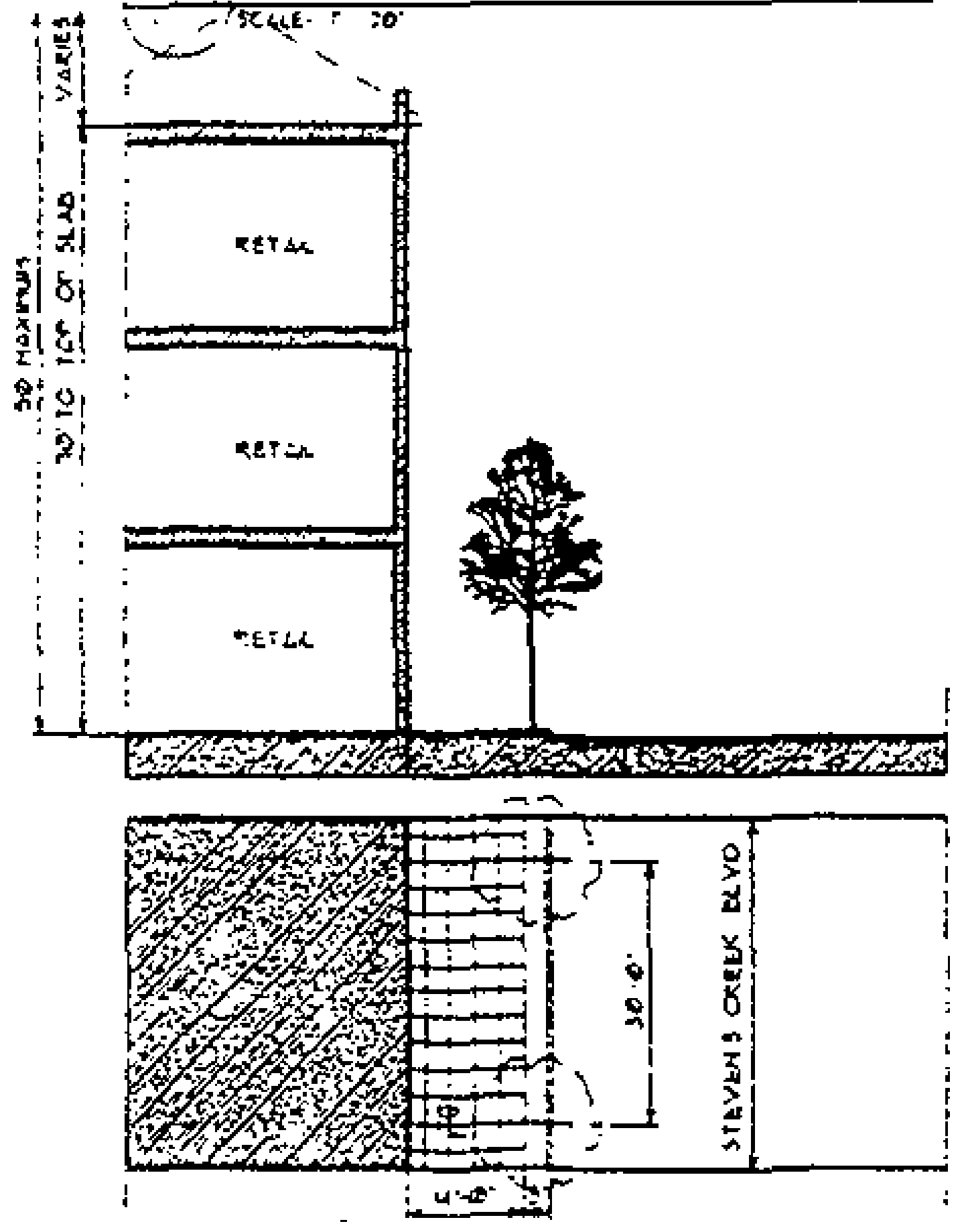
PLAN/SECTION - K
SCALE: 1" = 20'



PLAN/SECTION - L
SCALE: 1" = 20'



PLAN/SECTION - M
SCALE: 1" = 20'



PLAN/SECTION - N
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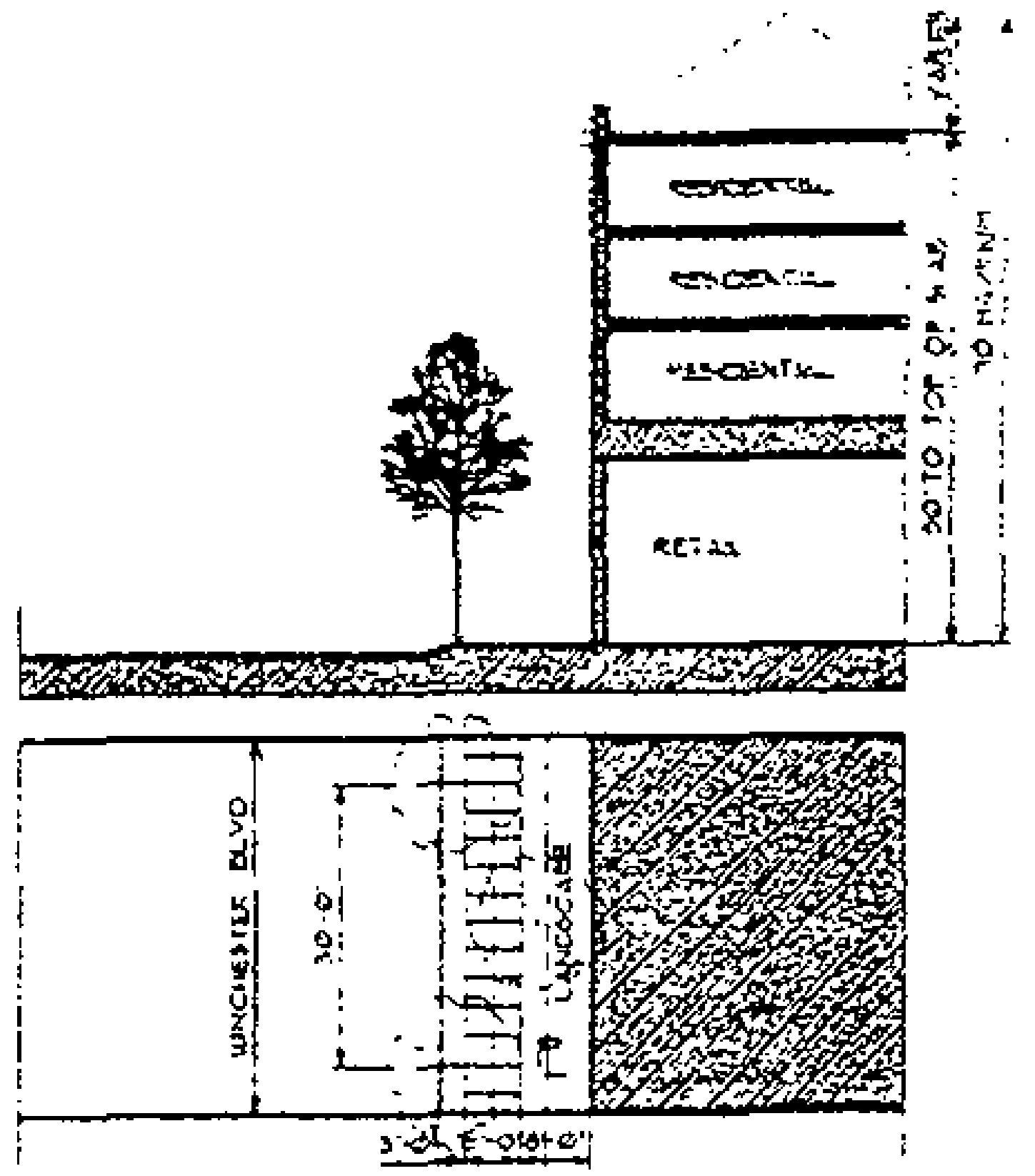
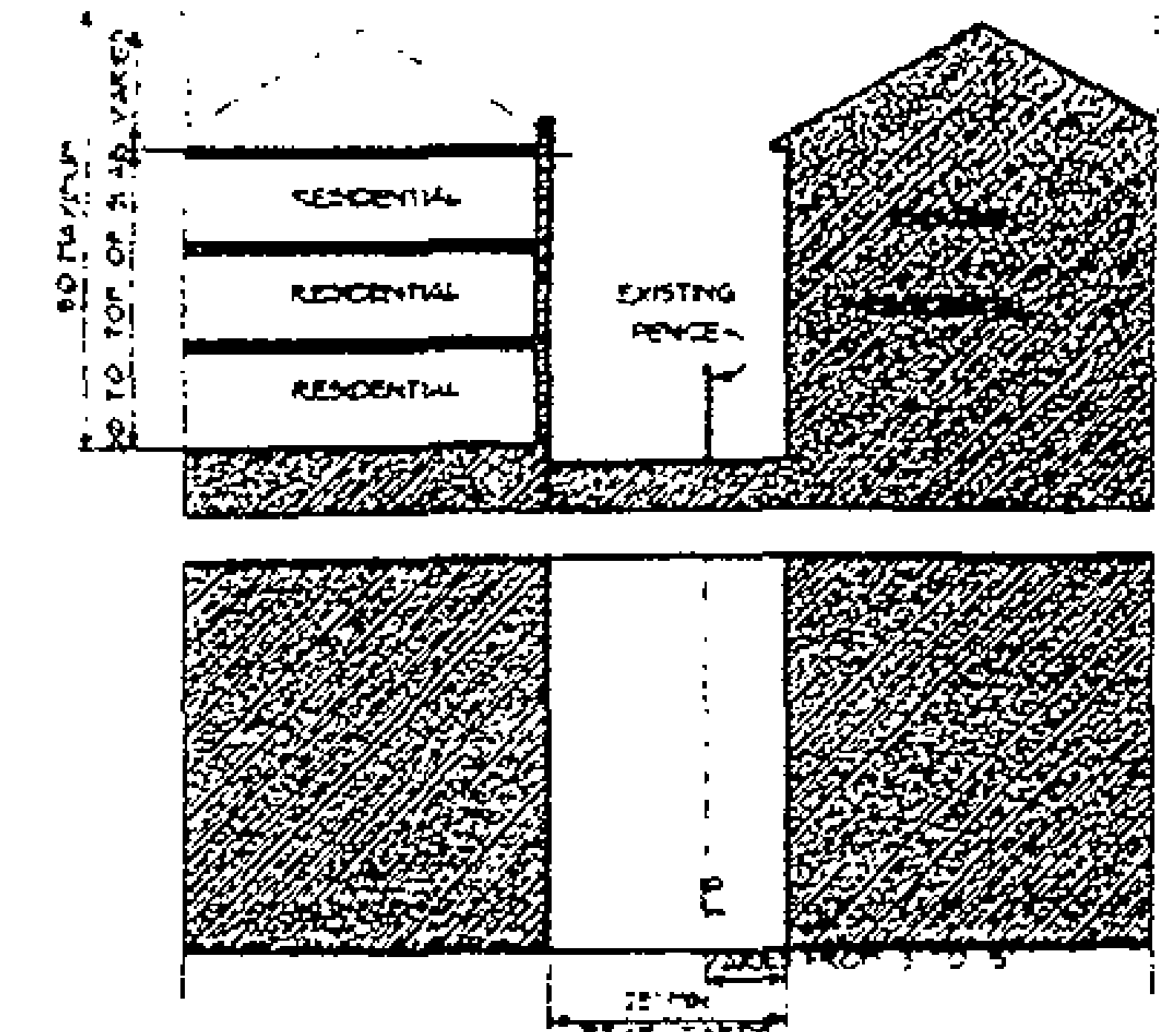


PLAN/SECTION - O
SCALE: 1" = 20'



PLAN/SECTION - P
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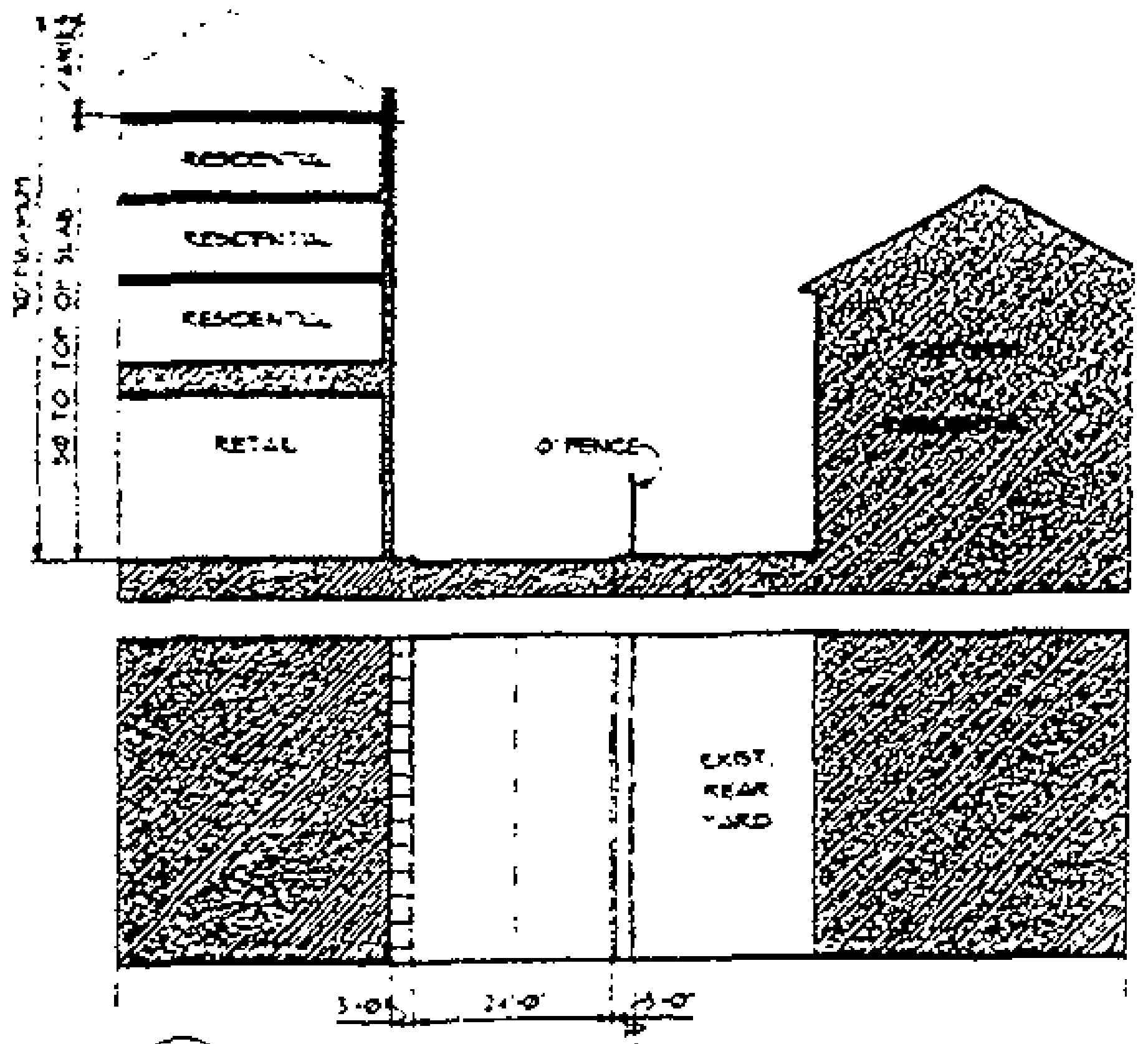

PLAN/SECTION - Q
SCALE: 1" = 20'

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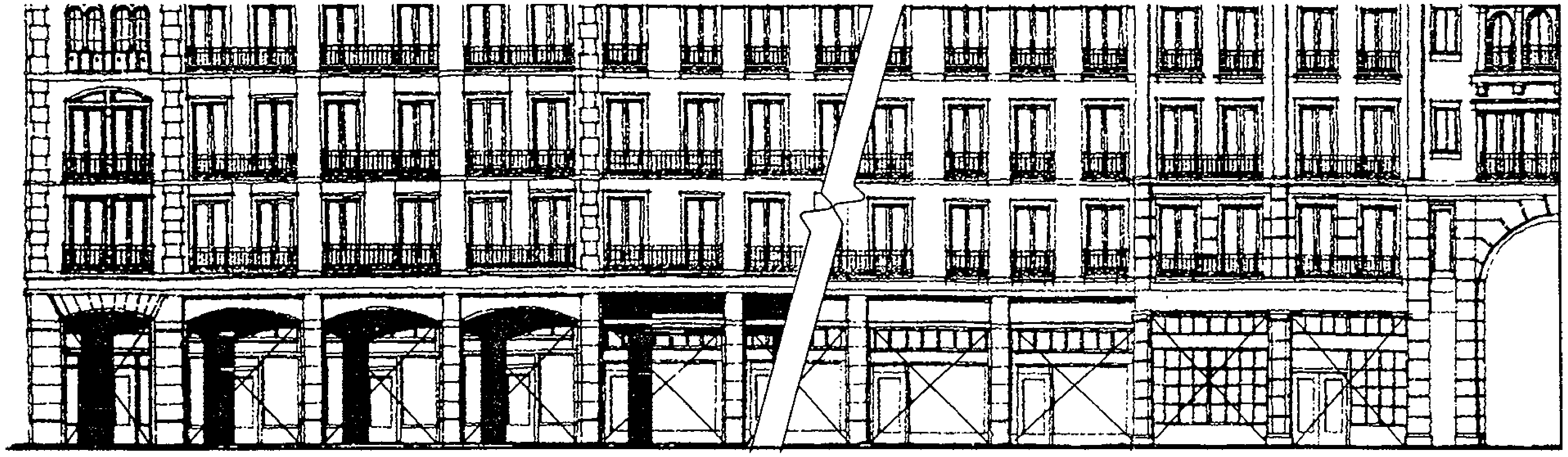

A TYP. RESIDENTIAL/COMMERCIAL MIXED-USE BUILDING ELEVATION WITH ARCADE
SCALE: [illegible]

B TYP. RESIDENTIAL/COMMERCIAL MIXED-USE BUILDING ELEVATION W/O ARCADE
SCALE: [illegible]

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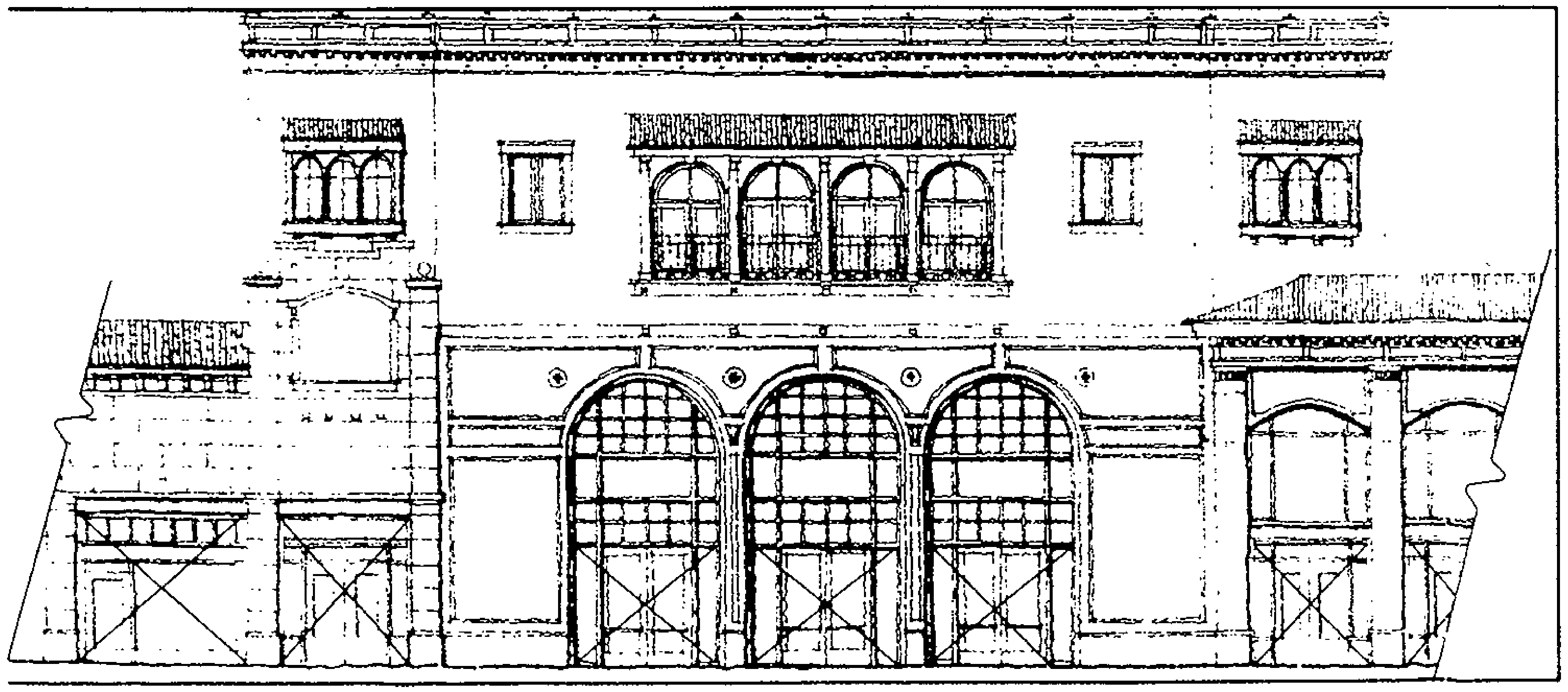
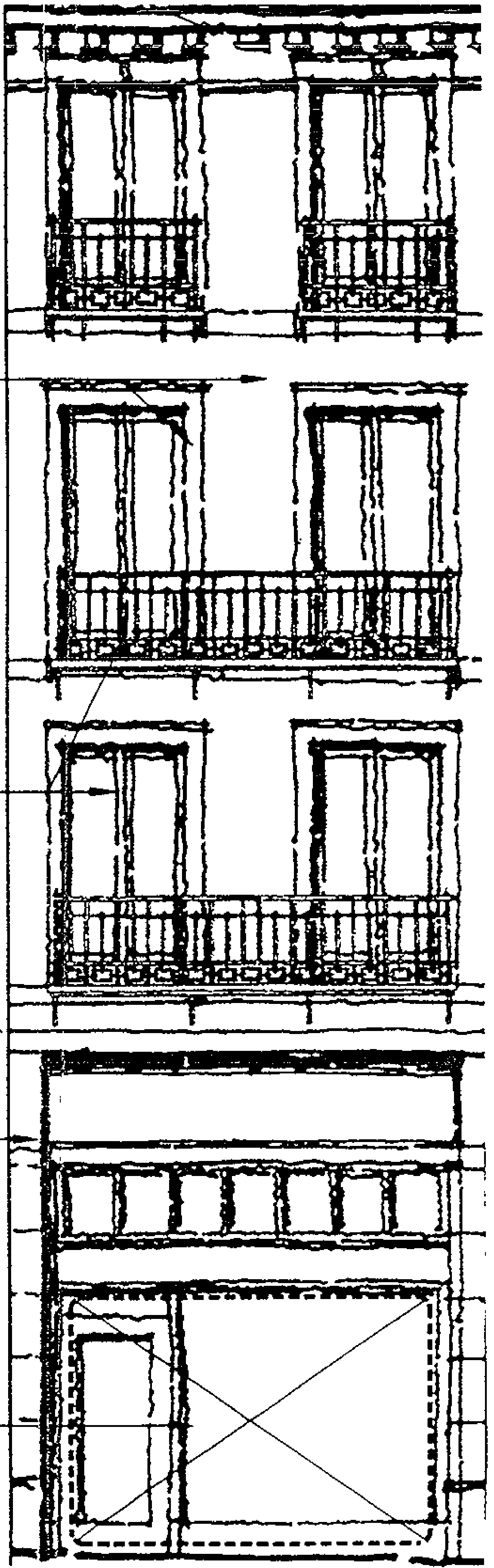
ARCHITECTURAL VOCABULARY:
THE ARCHITECTURAL DESIGN AND DETAILS ILLUSTRATED ARE CONCEPTUAL AND SUBJECT TO FURTHER REFINEMENT. THESE BUILDING ELEVATIONS ARE INTENDED TO ILLUSTRATE THE ARCHITECTURAL STYLE AND CHARACTER AS WELL AS THE SIZE, SHAPE, MATERIALS AND GENERAL DETAIL OF BUILDINGS. SPECIFIC BUILDING DESIGN WILL BE FINALIZED AT THE P.D. PERMIT STAGE. APPROPRIATE REGIONAL MATERIALS WILL BE USED THROUGHOUT THE PROJECT. THESE INCLUDE BRICK, TILE, STONE, PRE-CAST CONCRETE AND STUCCO, OR A COMBINATION OF THESE MATERIALS. NATURAL WOOD WITH A DARK STAIN IS APPROPRIATE AS AN ACCENT MATERIAL IN BALCONIES, BRACKETS, EAVES, ETC. WOOD TRIM AND THE USE OF WOOD COLUMNS IS ALSO APPROPRIATE ALONG WITH THE USE OF WOOD SHUTTERS, PLANTER BOXES AND AWNINGS AS ACCENT MATERIALS. THE PROJECT WILL BE DESIGNED WITH AN APPROPRIATE REGIONAL STYLE'S VOCABULARY. IT IS ANTICIPATED THAT THE RESIDENTIAL COMPONENT WILL BE COMPATIBLE WITH THE REMAINDER OF THE PROJECT SITE. STAND-ALONE ANCHOR RETAIL BUILDINGS WILL BE COMPATIBLE WITH THE REMAINDER OF THE PROJECT SITE WITH AN EMPHASIS ON A UNIQUE IDENTITY AS DEFINED BY THE ANCHOR TENANT. EXPOSED PARKING GARAGE FACADES WILL BE COMPATIBLE WITH THE PROJECT SITE AND SOFTENED WITH APPROPRIATE REGIONAL MATERIALS AND LANDSCAPING AS DETERMINED BY THE ARCHITECT.





OR OTHER APPROPRIATE REGIONAL
EXPRESSIONS AS DETERMINED
BY ARCHITECT

TYPICAL
WALL AND OPENING FRAME TREATMENT
MAY CONSIST OF:
-STUCCO, PAINTED EIFS, PAINTED
MOSAIC TILE AND/OR BRICK
WITH
-WOOD, CAST STONE, EIFS OR
PAINTED FRAMES
OR OTHER APPROPRIATE
REGIONAL EXPRESSIONS
AS DETERMINED BY ARCHITECT

TYPICAL
OPENING AND BALCONY TREATMENT
MAY CONSIST OF:
-WINDOWS AND FRENCH DOORS
WITH CLEAR GLASS SET IN PAINTED
METAL OR WOOD FRAMES.
-BALCONIES MAY CONSIST OF PAINTED
METAL OR WOOD WITH OTHER
APPROPRIATEREGIONAL EXPRESSIONS
AS DETERMINED BY THE ARCHITECT.

STREET LEVEL BASE
BUILDING FRAME TREATMENT
MAY CONSIST OF THE
FOLLOWING MATERIALS:
-STONE OR CAST STONE COLUMNS
-WOOD, TILE OR EIFS LINTELS
AND SURROUNDS
WITH OTHER APPROPRIATE
REGIONAL EXPRESSIONS
AS DETERMINED BY THE ARCHITECT.

NOTE: STOREFRONT DESIGN,
AWNINGS, TENANT GRAPHICS,
AND OTHER STREET LEVEL
BUILDING AMENITIES WILL BE
SUBMITTED BY THE COMMERCIAL
OCCUPANT AT THE TIME OF
BUILDING PERMIT SUBMISSIONS.

BUILDING ELEVATIONS

FIGURE 7

For the purposes of this discussion, the proposed project has been divided into six areas, as shown on the Land Use Plan, Figure 3. The square footage of commercial/retail space and the number of residential units that could be developed in each of those areas are expressed in ranges. The total development distributed throughout the project site will not exceed 650,000 square foot of commercial/retail, 1,200 residential units, and two 100 room hotels.

The discussion below refers to the plans which are included as Figures 3,4,5,6 and 7. These plans illustrate a proposed project that is currently being reviewed by the City of San Jose. The plans that are ultimately approved by the City may be revised to reflect input received during the project review process, including input related to this EIR. The plans include a Land Use Plan (Figure 3), and development standards which represent the parameters within which future development would occur. A "Conceptual Site Plan" represents one possible development scenario that conforms to those development standards; actual development may, however, be different than what is shown in the Conceptual Site Plan. At the time PD Permit applications are submitted to the City, additional environmental review will be required to determine if this EIR provides adequate clearance. The plan/sections (Figures 5 and 6) illustrate how buildings on the project boundary will relate to streets and adjacent properties. Figure 7 demonstrates the quality of architecture proposed for the main commercial street in the project.

Area 1

Area 1 is located in the northerly portion of the site adjacent to Stevens Creek Boulevard. There are seven buildings shown within this area on the Conceptual Site Plan, Figure 4. Three of the buildings are shown as commercial/retail (non-residential) structures. The other four buildings would have multi-tenant commercial/retail uses on the ground level with live/work spaces, small service/offices, and multi-family residential units located above. Area 1 will also contain parking garages. In total, Area 1 could contain between 200,000 and 400,000 square feet of commercial/retail development, a maximum of 300 residential units, a 100 room hotel, and 1,200 to 2,225 parking spaces.

Buildings in Area 1 will be set back a minimum of 5 feet from Stevens Creek Boulevard. The proposed buildings in this area will range in height from 70 feet to a maximum of 90 feet, as shown on the following plan/sections, Figure 5 and 6.

Area 2

Area 2 is located within the central portion of the site. There are six buildings shown in this area on the Conceptual Site Plan. Three of the buildings could have multi-tenant commercial/retail uses on the ground level with live/work spaces, small service/offices, and multi-family residential units located above. Two buildings within this area will be lower level parking garages with multi-family residential above. One commercial-only building is planned in the southernmost portion of this area. In total, Area 2 could contain between 130,000 and 300,000 square feet of commercial/retail development, 300 to 550 residential units, and 960 to 2,038 parking spaces.

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Buildings in Area 2 will be set back a minimum of 5 feet from Winchester Boulevard. The proposed buildings in this area will range in height from 50 feet to a maximum of 70 feet, as shown on the following plan/sections, Figure 5 and 6.

Area 3

Area 3 is located in the easterly portion of the project site. There is one building shown on the Conceptual Site Plan within this area but other buildings could be developed there instead. The one structure shown is identified as "free-standing" residential on the Conceptual Site Plan. In total, Area 3 could contain 125 to 250 residential units and 268 to 537 parking spaces.

Buildings in Area 3 will be setback 10 feet from Hemlock Avenue, and will range in height from 30 feet to a maximum of 50 feet. The project proposes to maintain a minimum 25 foot separation between buildings in Area 3 and the existing residential structures to the east, as shown on following plan/sections, Figure 5 and 6.

Area 4

Area 4 is located on the southeasterly corner of the site. There is presently one residential building shown on the Conceptual Site Plan, although it could also be developed with more than one structure. Area 4 could contain between 75 to 150 residential units, and between 94 to 188 parking spaces.

Buildings in Area 4 will be set back a minimum of 5 feet from the south and easterly site boundaries. The proposed building in this area could range in height from 30 feet to a maximum of 50 feet.

Area 5

Area 5 is located on the southwesterly corner of the site. There are two buildings shown on the Conceptual Site Plan within this section. One of the buildings shown is a multi-tenant commercial/retail structure on the ground floor with multi-family residential units located above. The other building in this area is identified as a parking garage with multi-family residential units above. One of the uses proposed in this area is an 100-room hotel, as shown on Figure 3. In total, Area 5 could contain between 20,000 and 40,000 square feet of commercial/retail development, 75 to 190 residential units, and 234 to 462 parking spaces.

Buildings in Area 5 will be set back at least 5 feet from Winchester Boulevard. The proposed buildings in this area could range in height from 50 feet to a maximum of 70 feet, as shown on plan/sections, Figure 5 and 6.

Area 6

Area 6 is located at the northwesterly corner of the site and is the location of the existing car dealership. If the car dealership should no longer remain a tenant on the site, 50,000 square feet of commercial uses could be developed on that corner and/or other development

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could be built on that portion of the site instead of elsewhere on the project. Area 6 would also include an additional parking structure.

Buildings in Area 6 will be set back at least 5 feet from Winchester Boulevard. The proposed buildings in this area could range in height from 50 feet to a maximum of 70 feet.

Project Access

Primary access to the project will be provided from Stevens Creek Boulevard; and from Winchester Boulevard at the existing signalized intersections of Winchester Boulevard/Olin Avenue, and Winchester Boulevard/Olsen Drive on the westerly site boundary. Right-in/right-out access along Stevens Creek Boulevard will be retained. Secondary access is planned along Hemlock Avenue at the northeasterly corner of the site.

Potential alternative access to the site could be provided at the terminus of Dudley Avenue at the southeasterly corner of the site.

D. PROJECT OBJECTIVES

The project is proposing a mixed-use development that effectively integrates a variety of dwelling unit types, entertainment and dining uses, retail commercial and service businesses, and live/work space in an attractive and economically viable design. The project would produce high density housing for all income levels, encourage public transit use, locate housing near job centers, optimize service capacity of existing infrastructure and encourage efficient use of infill property in compliance with General Plan policies. The project proposes a range and size of units to match the needs and income levels of the City's workers. It is anticipated that the development of housing at this location in San Jose would provide housing for the employees of nearby office and commercial uses and would, therefore, reduce vehicle trip lengths to existing and planned jobs in the San Jose area. In addition, the project proposes residential and commercial development easily accessible to transit facilities, which would also serve to shorten vehicle trip lengths. The objectives of redeveloping this infill site with this kind of project include:

1) Providing a high quality living environment;
2) Maximizing the opportunities for people to live, work, shop, and be entertained at proximate locations that reduce regional traffic congestion;
3) Locating shopping, dining, and entertainment uses at a convenient location central to existing residential uses in the County;
4) Redeveloping the project site with a project that results in upgrading, beautifying, and revitalizing an existing shopping center;
5) Making efficient use of existing infrastructure.

E. CONSISTENCY WITH RELEVANT PLANS AND POLICIES

In conformance with Section 15125(b) of the CEQA Guidelines, the following section discusses the consistency of the proposed project with relevant plans and policies.

1. Regional and Local Plans and Policies

1982 Bay Area and Policies and 1994 Clean Air Plan
ABAG/BAAQMD/MTC

The 1982 Bay Area Air Quality Plan and 1994 Clean Air Plan ('94 CAP) establish regional policies and guidelines to meet the requirements of the Clean Air Act, as amended through 1994. The Bay Area is a non-attainment area for carbon monoxide, since federal standards are exceeded for that pollutant. Each non-attainment area was required to submit detailed plans to the State by June 30, 1991, to demonstrate new control programs and schedules for their implementation.

The Bay Area '94 Clean Air Plan is the current regional strategy for improving air quality. The Plan proposes the adoption of transportation, mobile source and stationary source controls on a variety of pollutant sources to offset population growth and provide improvement in air quality. The consistency of the proposed project with this regional plan is primarily a question of the consistency with the population/employment assumptions utilized in developing the plan

Consistency: The project will contribute to local traffic in the peak hours. This increase in traffic would be a source of increased air pollutant emissions, which will contribute to exceedances of regional air quality standards. Construction activities associated with future development would also generate minor temporary air pollution impacts.

This project does not propose to add additional jobs to the City of San Jose General Plan land use buildout scenario. Since the growth projections in the Clean Air Plan are based on General Plan buildout and the project does not propose to increase the number of jobs in the General Plan buildout assumption, this project is consistent with the Clean Air Plan.

Santa Clara Valley Nonpoint Source Pollution Control Program

The Santa Clara Valley Nonpoint Pollution Control Program was developed in accordance with the requirements of the 1986 San Francisco Bay Basin Water Quality Control Plan to control nonpoint sources of pollution entering water sources and prevent deterioration of water quality. The Nonpoint Source Program was also designed to fulfill the requirements of the Federal Clean Water Act and the Environmental Protection Agency's National Pollutant Discharge Elimination System (NPDES) permit requirements for storm water runoff.

The State Water Resources Control Board implemented an NPDES general construction permit for the Santa Clara Valley. For projects disturbing five acres or greater, a Notice of Intent (NOI) and Storm Water Pollution Prevention Plan (SWPPP) must be prepared prior to commencement of construction.

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This development will conform to the requirements of the NPDES permitting program. The proposed construction would increase storm water runoff. Runoff-borne pollution and associated impacts will increase both during and after construction of the future development of the site. Section II (F) of this DEIR identifies mitigation measures proposed to reduce water quality impacts in runoff, both for construction and in the long-term, which are consistent with the standards of the Non-Point Source Program.

Consistency: The proposed project is consistent with the provisions of the Non-Point Source Program.

Santa Clara County Congestion Management Program

In accordance with Proposition 111, the Congestion Management Agency prepared the Santa Clara County Congestion Management Program (CMP). The CMP legislation requires that all urbanized counties in California prepare a Congestion Management Program in order to obtain each county's share of the increased gas tax revenues. The CMP legislation requires that each CMP contain nine mandatory elements: 1) a system definition element; 2) a traffic level of service standard element; 3) a transit standards element; 4) a trip reduction and transportation demand management element; 5) a County-wide transportation model and database element; 6) a land use impact analysis program element; 7) a capital improvement program element; 8) an annual monitoring and conformance elements; and 9) a deficiency plan element.

Consistency: The traffic analysis prepared for the proposed project discusses impacts on CMP facilities. As discussed in Section II (B), the project as proposed is consistent with the provisions of the CMP.

San Jose 2020 General Plan

The San Jose 2020 General Plan is an adopted statement of goals and policies which serve as the major planning document defining the character and quality of future development in the City. The project site is designated *Regional Commercial* on the City of San Jose 2020 General Plan Land Use/ Transportation Diagram. The Regional Commercial land use designation applies to existing shopping centers which reflect the cumulative attraction of a regional center and one or more nearby community or specialty centers in close proximity, whose combined drawing power is of a regional scale.

Under a General Plan Discretionary Alternate Use Policy, *Residential Uses on Commercially Designated Parcels,* high density residential development (12 dwelling units per acre or more) or mixed use development can be allowed on properties designated for *Regional Commercial* use if the development is located on major thoroughfares, takes access from a major thoroughfare, and "is non-residential environment". The maximum density allowed under this policy is 40 dwelling units per acre if the site is on a Major Arterial (115-130 feet right-of-way). Both Stevens Creek Boulevard and Winchester Boulevard are designated as Major Arterials. Since the project takes primary access from these streets and has frontages on them, the project is eligible for consideration under this Discretionary Alternative Use Policy.

Major Strategies

Economic Development Strategy

The City of San Jose's Economic Development Strategy strives to make San Jose a more "balanced community" by encouraging more commercial and industrial development to balance the existing residential development. San Jose currently has a significant surplus of housing over employment, a "jobs/housing imbalance". This makes it difficult to provide adequate urban services, since residential development does not generate sufficient revenue to cover service demands. Economic development is, therefore, a basic priority for San Jose, both for financial reasons and to provide employment opportunities for San Jose residents.

The redevelopment of the Town and Country Village shopping center would increase the City's tax base by providing up to 650,000 square feet of commercial development and two hotels.

Sustainable City Strategy

The Sustainable City Strategy reflects San Jose's desire to become an environmentally and economically sustainable city, minimizing waste and efficiently using its natural resources. The redevelopment of the project site with a mixed use development which includes a residential component above retail uses would help reduce traffic generated by the project by internalizing the trips on-site. In addition, the proposed project will include landscaping which meets the City's water conservation guidelines, and a pedestrian circulation system to encourage access to transit.

General Plan Goals and Policies

Balanced Community Goal

One of the policies for achieving the Balanced Community Goal states that the City should foster development patterns which will achieve a "whole and complete community" in San Jose, and improve the balance between jobs and housing, to the greatest extent feasible. The redevelopment of the Town and Country Village shopping center would contribute to that balance by locating jobs within the planned urban area.

Urban Design Goals and Policies

Urban Design Goal

The City's Urban Design Goal requires the highest standards of architectural and site design for all development projects, both public and private.

The General Plan also contains a number of urban design policies intended to guide the City's physical form and project the character and integrity of residential neighborhoods.

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Urban Design Policy #1

The City should continue to apply strong architectural and site design controls on all types of development for the projection and development of neighborhood character and for the proper transition between areas with different types of land uses. This project will require a PD Permit, which will be reviewed by City staff for adherence to this policy.

Urban Design Policy #2

Private development should include adequate landscaped areas. Landscaped areas should utilized water efficient plant materials and irrigation systems. Energy conservation techniques such as vegetative cooling and wind shielding should also be utilized. All landscaped areas should include provision for ongoing landscape maintenance. The proposed project includes landscaping integrated into the project's design, all of which will be maintained by the property owner.

Urban Design Policy #10

Residential building height should not exceed 45 feet except in specific areas of the City. The project site is not located within one of those specific areas; however, the project proposes a mixed use development not a wholly residential project.

Urban Design Policy #11

Non-residential building height should not exceed 45 feet except for mixed use projects(residential and non-residential uses) on sites of 20 acres or larger located near major transportation arterials or corridors, the maximum building height is 90 feet, provided that the project contains a minimum of 200 dwelling units in a master Planned Development zoning. The intent of this policy is to encourage mixed use development and allow flexibility of building heights for design and aesthetic purposes without increasing the intensity of non-residential use beyond what could be developed within the 45-foot height limit. This mixed-use project would be developed under a master Planned Development zoning and will include between 800 and 1,200 dwelling units on a 39 acre site, and no structures will be higher than 90 feet.

Economic Goals and Policies

Economic Development Goal #2

Economic Development Goal #2 is intended to create a stronger municipal tax base by obtaining a greater share of the total industrial and commercial development in the County, and by nurturing and encouraging expansion of the existing industrial and commercial development in the City. The proposed project includes an expansion of existing commercial uses.

Economic Development Policy #1

The City should reduce the present imbalance between housing and employment by seeking to obtain and maintain an improved balance between jobs and workers residing in San Jose. A perfect balance between the number of jobs and employed residents may not be achievable but the City should strive to achieve a minimum ratio of 0.80 jobs/employed resident to attain greater fiscal stability. The proposed project will add more housing than is required for the number of jobs provided on-site.

Parks and Recreation Level of Service Policy #16

Level of Service Policy 16 addresses Citywide level of service measures as benchmarks to be used to evaluate major General Plan land use and policy changes. This policy identifies City service level objective for park and recreational lands of 3.5 acres of neighborhood and community serving recreational lands per 1,000 population. Based upon a projected occupancy rate of 2.29 persons per household unit, the project could result in the need for a minimum of 6.4 to 9.6 acres of public neighborhood/community serving park land.

This policy is implemented through application of the City's Park Impact Fee and Parkland Dedication ordinances. The standards set forth in Section 19.38.050 of the Municipal Code are .003 acres/dwelling unit, with an occupancy rate for multi-family development of 2.029. Credit is given for both private open space and recreation improvements provided by a project, and for public park and recreation improvements. This project will be conditioned to meet the requirements of these ordinances.

Consistency: Overall, the redevelopment of the project site with the proposed project is consistent with the relevant goals and policies of the City of San Jose General Plan.

F. USES OF THE ENVIRONMENTAL DOCUMENT

This Environmental Impact Report (EIR) will be used to provide the environmental review necessary for the development of the proposed project. The EIR provides the City of San Jose as the Lead Agency with relevant environmental information to use in considering the approval of the project.

The City of San Jose will use the EIR in its decision making process for the discretionary approvals to implement the project, as listed below.

- PD Rezoning, PD Permits, Tentative Maps
- Demolition Permit(s)
- Infrastructure improvements, including acquisition of right-of-way
- Tree Removal Permit

II. ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

A. LAND USE

1. Existing Setting

Overview of the Project Area

Town and Country Village is located in central San Jose, in a predominately commercial area. The project site is approximately three miles west of Downtown San Jose. The City of Santa Clara city limit boundary runs along the northern side of Stevens Creek Boulevard adjacent to the northerly project boundary. Land uses in the project area include regional commercial, commercial/office, retail, and residential development.

Existing Land Uses

The majority of the project site is currently developed. The existing Town and Country Village shopping center contains approximately 140 business suites in ten, one- to two-story buildings totaling 285,000 square feet, and covers the majority of the site, as shown on the following Photographs of the Site, Figures 8 and 9. These buildings are occupied by various types of retail uses, specialty stores, boutiques, restaurants, and small offices. Courtesy Chevrolet car dealership, which contains 40,000 square feet in buildings and a car display lot, is located on approximately six acres on the northwesterly corner of the site. The Town and Country Tennis Club, which includes eight tennis courts and a two-story clubhouse, is located on the southeasterly corner of the site. Approximately five acres of the site along the easterly boundary is vacant grassland.

Surrounding Land Uses

The project site is located in an area of mixed commercial and residential development as shown on the Aerial Photograph, Figure 10. Valley Fair Shopping Center is located to the north of the project site. The Winchester Mystery House, a State of California Registered Historic Landmark, a movie theater complex, and various commercial uses are located along the westerly site boundary on the west side of Winchester Boulevard. The Town and Country Village and Courtesy Chevrolet facilities surround an existing two-story commercial building and a three story office building along the westerly site boundary adjacent to Winchester Boulevard. Two six- and ten-story office towers are located on Tisch Way, adjacent to the southwesterly site boundary. The Pacific Bell Telephone two-story office building is located adjacent to the southeasterly site boundary. New single family residences are currently under construction along the easterly site boundary. A mixture of small-scale commercial and retail uses located in former residential structures, single family residences and duplexes are located along Hemlock Avenue adjacent to the northeasterly site boundary. In addition, a two story office building is along Stevens Creek Boulevard adjacent to the northeasterly corner of the site.

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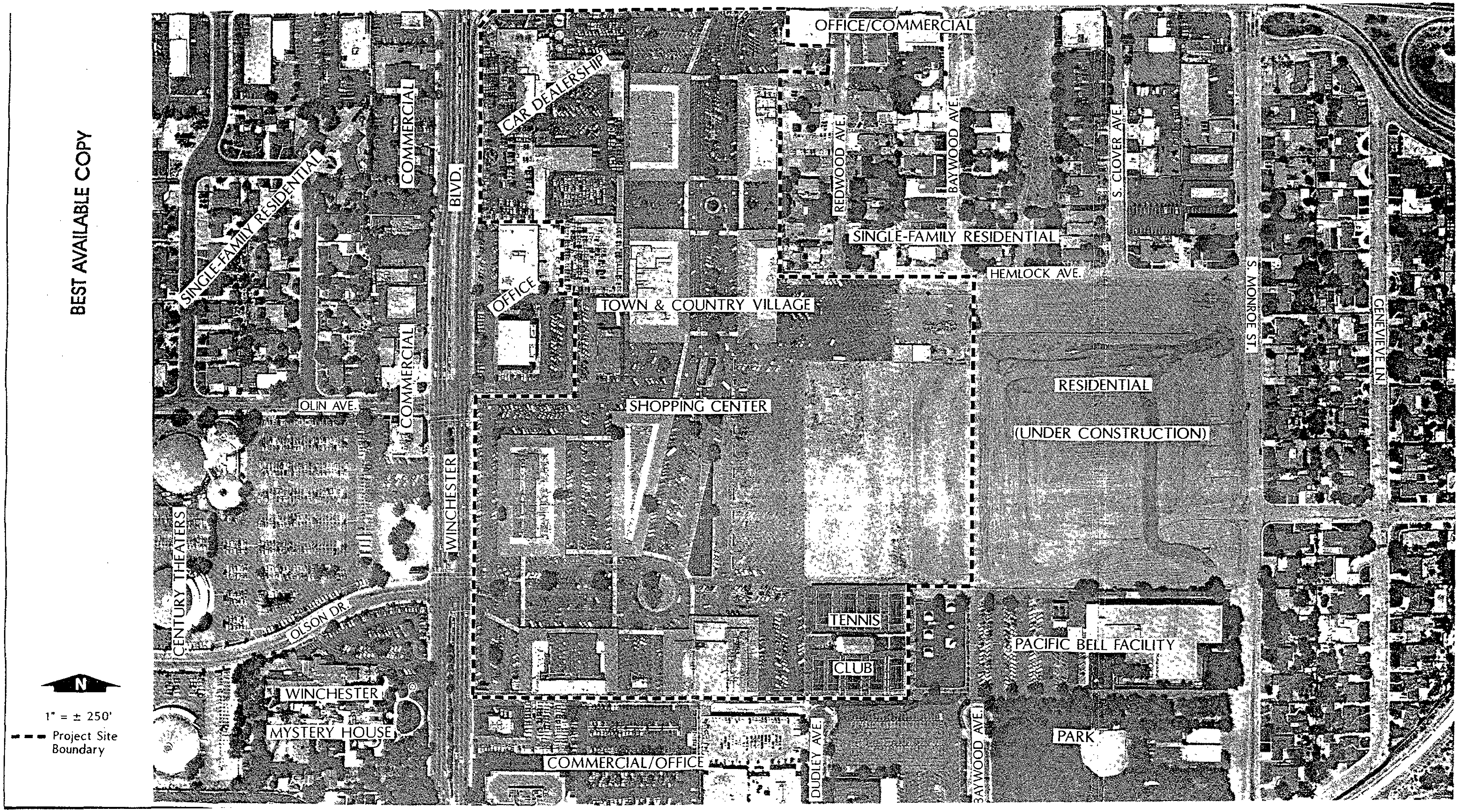

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PHOTO 3: View of the western boundary of the project site along Winchester Blvd.

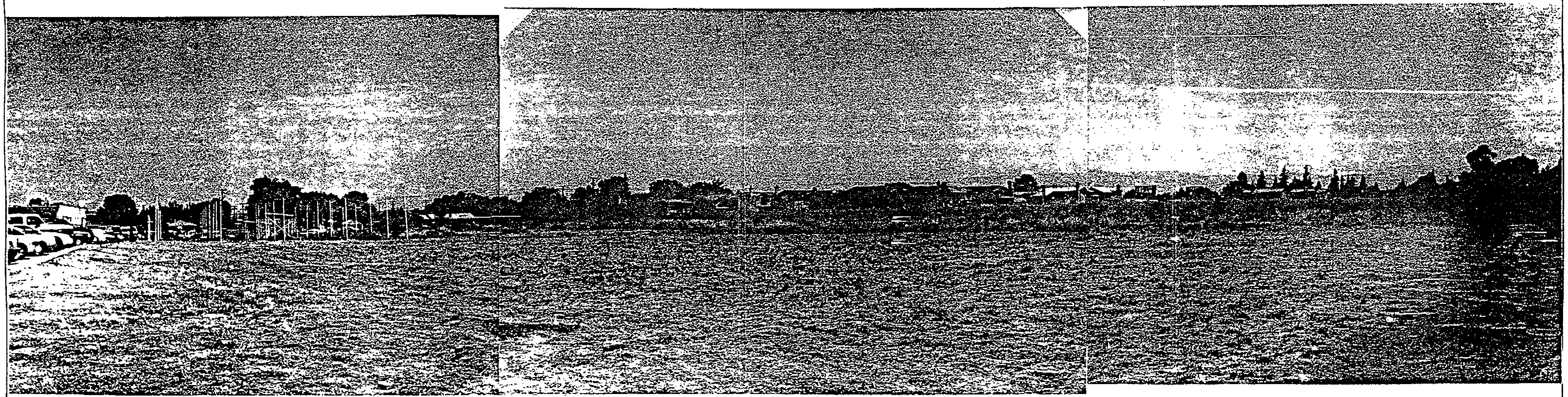

PHOTO 4: View of the eastern portion of the project site, taken from the southern site boundary.

PHOTOS 3 AND 4

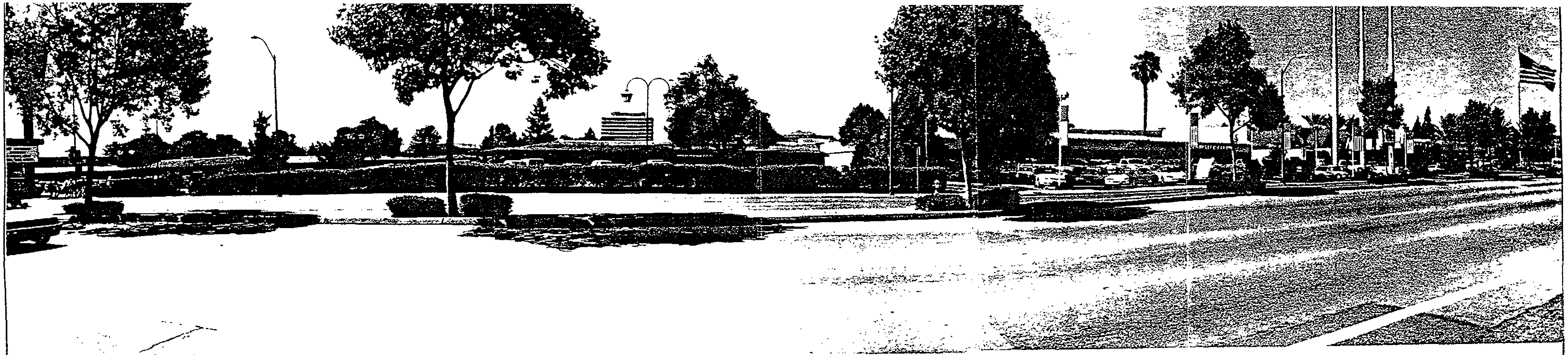

PHOTO 1: View of the project site's northern boundary, along Stevens Creek Blvd.

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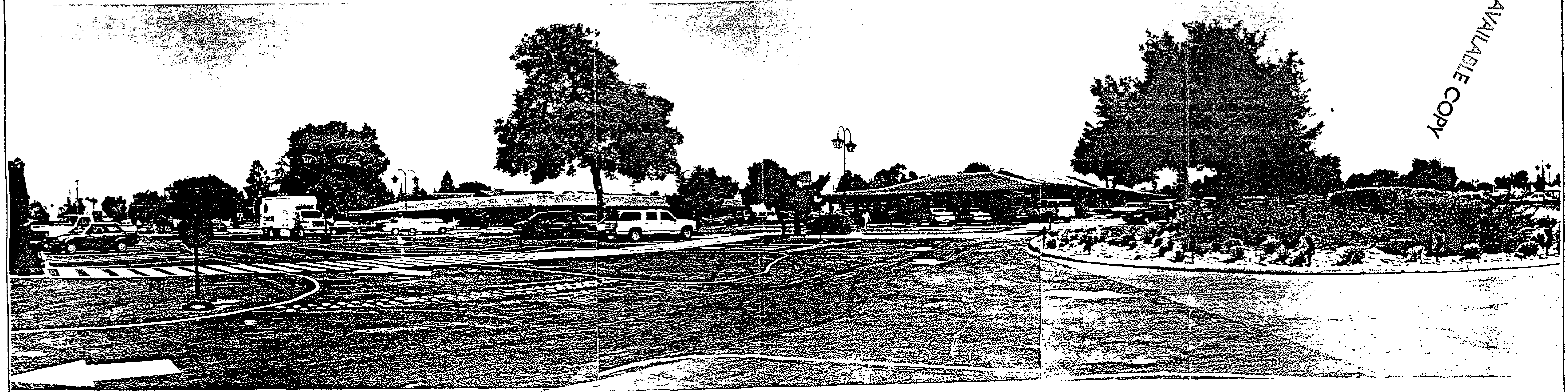

PHOTO 2: Interior view of the project site taken from the southern boundary, looking towards the northwest.

PHOTOS 1 AND 2

2. Land Use Impacts

Thresholds of Significance

For the purposes of this project, a land use impact is considered significant if the project will:

- conflict with adopted land use goals and policies of the community;
- induce substantial growth or concentration of population;
- displace a large number of people;
- disrupt or divide the physical arrangement of an established community;
- conflict with established residential, recreational, educational, religious, or scientific uses of the area;
- convert prime agricultural land to non-agricultural use or impair the agricultural productivity of prime agricultural land;
- substantially increase ambient noise levels for adjoining areas; or
- expose substantial numbers of people to health or safety hazards.

The proposed project involves the redevelopment of the existing 285,000 square foot Town and Country Village shopping center and, potentially, the existing 40,000 square feet of buildings in the Courtesy Chevrolet car dealership, with a maximum of 650,000 square feet of commercial/retail uses, 1,200 residential units, and two 100 room hotels on approximately 39 acres. The proposed redevelopment of the site would result in land use impacts associated with the proposed increase in development intensity, increase in building heights, and potential land use incompatibility. These direct impacts would also create additional indirect land use impacts including increased traffic, air pollutant emissions, noise impacts, and visual changes.

Land Use Conflicts

Land use conflicts can arise form two basic causes: 1) a new development or land use may cause impacts to persons or the physical environment in the vicinity of the project site or elsewhere; or 2) conditions on or near the project site may have impacts on the persons or development introduced onto the site by the new project. Both of these circumstances are aspects of *land use compatibility*. Potential incompatibility may arise from placing a particular development or land use at an inappropriate location, or from some aspect of the project's design or scope. Depending on the nature of the impact and its severity, land use compatibility conflicts can range from minor irritation and nuisance to potentially significant effects on human health and safety. The discussion below distinguishes between potential impacts *from* the proposed project *upon* persons and the physical environment, and potential impacts *from* the project's surroundings *upon* the project itself.

Impacts From the Project

The proposed project will change the character of the project site. It will replace the existing Town and Country Village shopping center, tennis club, and potentially, the car dealership with a mixed use development with commercial/retail space, residential units, and up to two hotels. The proposed project will increase activity as well as traffic on and surrounding the

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site. The demolition and construction phases of the project will also involve significant noise, activity, and dust.

Because they are generally compatible uses, the project will not have significant land use impacts upon Valley Fair Shopping Center to the north, commercial uses to the west, the office buildings to the south, or the Pacific Bell facility to the southwest. The residential uses located to the east and northeast of the project site are generally considered a sensitive land use.

Area 3 of the proposed project, which is located nearest these residential properties, has been designed with residential-only buildings in that area. The density of the development proposed in Area 3 is greater than the density on either of the adjacent residential sites. The residential units currently under construction along the easterly property boundary are approximately 25 feet in height and have a rear or side yard setbacks from the shared property boundary of between 2 feet and 10 feet. One residential building is proposed by the project in Area 3 adjacent to the easterly boundary. Figures 5 and 6 contain cross sections that illustrate how this proposed residential structure will relate to the new single family homes. The building will range in height from 30 feet to a maximum of height of 50 feet, as shown on Figures 5 and 6 . A 25 foot separation will be maintained between the proposed building and the adjacent residences currently under construction. The proposed buildings and the residential units under construction to the east are similar enough in height, mass, and building separation to be considered compatible.

The residences located along Hemlock Avenue are one-story structures which are set back from the edge of the roadway by approximately 20 feet. Hemlock Avenue, which is located between the project site and the residences, is approximately 30 feet wide at the project site. The project proposes a 10-foot set back from Hemlock Avenue, see Figure 5 and 6. Thus, the proposed project structure will be located approximately 60 feet from the residences on Hemlock Avenue.

There is existing development on the west side of Redwood Avenue, including a variety of commercial land uses in converted residential structures. The project proposes to maintain a fence along the property line adjacent to these uses (see cross section in Figures 5 and 6).

The southeast corner of the site proposes development adjacent to an office parking lot, which is not considered a sensitive land use.

Construction Impacts

Construction of the project will involve the demolition of the existing shopping center, grading, delivery of construction materials, and the construction itself will use power equipment, possibly pile drivers, concrete trucks, and other sources of noise, dust, and traffic. The issues of noise and dust are also discussed in Section II(C) and (D) of this EIR. While construction impacts may be significant, they are temporary in nature, and can be reduced in their severity.

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Indirect Land Use Impacts

Due to the increase in development intensities, the proposed project would generate increased local and regional traffic, noise impacts, and increased air pollutant emissions. These impacts are addressed in their corresponding sections of this DEIR.

Impacts to the Project

The potential impact to future project occupants and residents of the project from noise is discussed in Section II (D) of this EIR. Other possible site constraints to the project include the presence of hazardous materials due to historical agricultural uses on the site. A discussion of hazardous materials on the site is provided in Section (H) of this EIR. The discussion in those sections does not identify significant constraints that would preclude development of the project on the site.

Conclusion: The project will not result in significant land use impacts to existing land uses, including residential development, and does not propose new land uses that will be significantly adversely impacted by nearby conditions or land uses. **(Less Than Significant Impact)**

B. TRANSPORTATION

A traffic analysis was prepared for this project by Barton-Aschman Associates, Inc. in November 1997, and is attached to this EIR as Appendix A.

1. Existing Setting

Existing Roadway System

Figures 1 and 2 illustrate the local and regional street and roadway system in the project area. Regional access to the project site is provided by I-880 and I-280:

I-880 is a six-lane freeway with no high-occupancy vehicle (HOV) lanes in the project area. I-880 extends northward to Oakland and southward, as SR 17 south of I-280, to Santa Cruz. Access to the site is provided via a full interchange at Stevens Creek Boulevard.

I-280 is an eight-lane freeway [three mixed-flow lanes and one high-occupancy vehicle (HOV) lane in each direction]. I-280 runs in a predominately north/south direction from San Francisco through the peninsula to its junction with I-680 in San Jose. In the South Bay, however, I-280 generally runs in an east/west direction. Access to the site is provided via a partial interchange at Winchester Boulevard.

Local access to the site is provided by Stevens Creek Boulevard, Winchester Boulevard, Moorpark Avenue, and San Tomas Expressway. These roadways are described below:

Stevens Creek Boulevard is a six-lane divided arterial which runs in an east/west direction. The roadway begins as San Carlos Street east of Downtown San Jose and continues west through the Cities of Santa Clara and Cupertino. Stevens Creek Boulevard provides direct access to the project site via a full-access signalized driveway at the intersection of Emporium Way and Stevens Creek Boulevard.

Winchester Boulevard is generally a six-lane divided arterial that runs in a north/south direction reaching from Santa Clara to the north, through Campbell to the south. Immediately, south of Stevens Creek Boulevard, Winchester Boulevard is a six-lane facility. North of Stevens Creek Boulevard, the roadway narrows to four lanes. Winchester Boulevard provides access to the project site via two full access signalized driveways at the intersections of Olin Avenue and Olsen Drive.

Moorpark Avenue is a four-lane roadway which runs in an east/west direction. This facility provides access to the site via Winchester Boulevard. Moorpark becomes Bollinger Road west of Lawrence Expressway, and terminates as an on-ramp to I-280 east of Leigh Avenue.

San Tomas Expressway is a six-lane divided expressway (two mixed flow lanes and one HOV lane in each direction) which generally runs in a north/south direction, from the City of Santa Clara through the City of San Jose to the City of Campbell. This facility provides access to the site via Moorpark Avenue and Stevens Creek Boulevard.

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Transit Service

Bus service in the vicinity of the project site is provided by the Santa Clara Valley Transportation Authority (VTA) as shown on Figure 11. The project site is served directly by Routes 60, 23, 24, and 36, which are described below:

Route 60 provides service between Los Gatos and Great America Parkway. This line operates on a 15- to 30-minute headway and provides service along Winchester Boulevard adjacent to the site.

Route 23 provides service between Downtown San Jose and San Antonio Shopping Center in Mountain View. This line operates on a 30-minute headway and provides service along Stevens Creek Boulevard near the site.

Route 24 provides service between Downtown San Jose and the California Avenue (Palo Alto) Train Station. This line operates on a 30-minute headway and provides service along Stevens Creek Boulevard near the site.

Route 36 provides service between East San Jose and Vallco Fashion Park. This line operates on a 15- to 30-minute headway and provides service along Winchester Boulevard and Forest Avenue near the site.

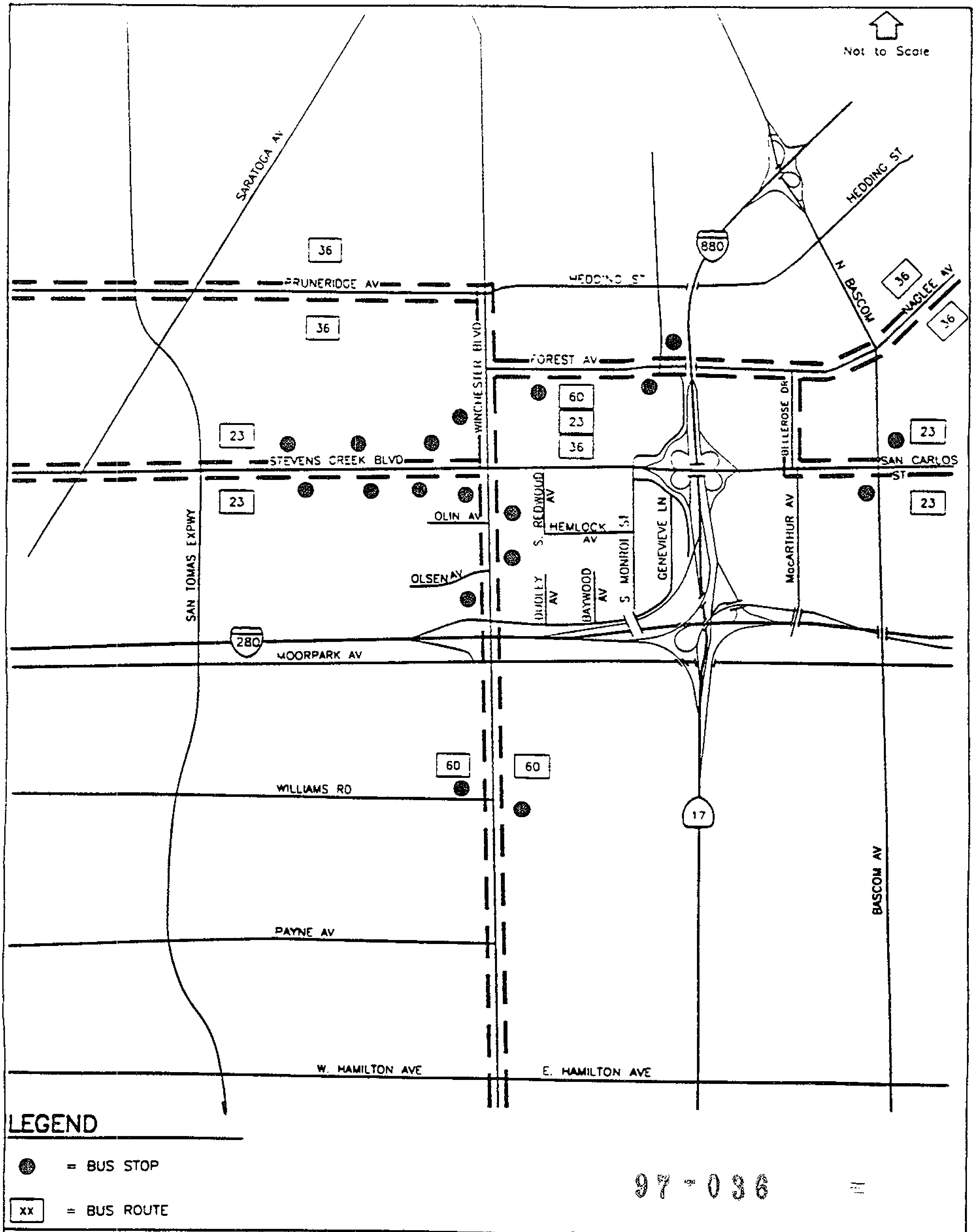
Bicycle and Pedestrian Facilities

The project site is relatively isolated from any bicycle routes designated by the Santa Clara County Bikeways Network. Sidewalks are available along both sides of Stevens Creek Boulevard and Winchester Boulevard, with pedestrian crossings provided at signalized intersections. The City of San Jose Transportation Bicycle Network designates Winchester Boulevard as a bicycle route.

Existing Intersection Levels of Service

The operating conditions of the key intersections in the project area were evaluated with level of service (LOS) calculations. *Level of service* is a qualitative description of intersection operation, ranging from LOS A, or free-flow conditions, to LOS F, or jammed conditions. Two analytical methods were used in the study to meet the City of Santa Clara and City of San Jose requirements.

The San Jose method estimates the level of service based on critical volume-to-capacity (V/C) ratios. The volumes of the vehicles in the turning movements that dictate the operation of the intersection are divided by the capacity of those movements. The individual ratios are added to obtain the intersection V/C ratio. The V/C ratio is correlated to a level of service, as shown in Table 2. An acceptable level in the City of San Jose for local intersections is defined as LOS D or better.



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TRANSIT ROUTES

FIGURE 11

Table 2
Signalized Intersection Level of Service Definitions Using Volume-to-Capacity Ratios

Level of Service	Interpretation	V/C Ratio
A	Uncongested operations; all queues clear in a single signal cycle.	Less Than 0.600
B	Very light congestion; an occasional approach phase is fully utilized.	0.600-0.699
C	Light congestion; occasional backups on critical approaches.	0.700-0.799
D	Significant congestion on critical approaches, but intersection functional. Cars required to wait through more than one cycle during short peaks. No long-standing queues formed.	0.800-0.899
E	Severe congestion with some long-standing queues on critical approaches. Blockage of intersection may occur if traffic signal does not provide for protected turning movements. Traffic queue may block nearby intersections(s) upstream of critical approach(es).	0.900-0.999
F	Total breakdown, stop-and-go operation.	1.000 and Greater

The level of service method used by the City of Santa Clara for regional intersections evaluates intersection operation based on the average stopped vehicular delay. The average delay is calculated using CAPSSI-11 software and is then correlated to a level of service, as shown in Table 3. The traffic report also includes an analysis of regional intersections in San Jose based upon Congestion Management Agency Methodology; however, the City of San Jose does not use this methodology to determine traffic impacts for CEQA purposes in San Jose.

Table 3
Intersection Level of Service Definitions
Using Average Stopped Vehicular Delay

Level of Service	Description	Average Stopped Delay Per Vehicle (Sec.)
A	Operations with very low delay occurring with favorable progression and/or short cycle lengths.	≤ than 5.0
B	Operations with low delay occurring with good progression and/or short cycle lengths.	5.1 to 15.0
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	15.1 to 25.0
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	25.1 to 40.0
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	40.1 to 60.0
F	Operation with delays unacceptable to most drivers occurring due to oversaturation, poor progression, or very long cycle lengths.	> 60.0

Existing peak-hour traffic volumes were obtained from previous studies and supplemented with new manual turning-movement counts as described in Appendix A.

The existing volumes were used with the existing lane configurations and signal phasing as inputs to the LOS calculation method to evaluate the current operations of the key intersections. The results are presented in Tables 4 and 5. The results show that three of the study intersections in San Jose currently operate at an unacceptable LOS E or worse during at least one of the peak-hours. The intersection of Hamilton Avenue and Winchester Boulevard operates at LOS E in the PM peak-hour. The intersection of Moorpark Avenue and San Tomas Expressway operates at LOS E in the AM peak-hour and at LOS F in the PM peak hour. The intersection of San Tomas Expressway and Stevens Creek Boulevard operates at LOS F in the PM peak hour. All other study intersections currently operate at an acceptable LOS D or better in both of the peak hours. The intersection level of service calculation sheets for the San Jose method are included in Appendix A.

All the key regional Santa Clara intersections are operating at acceptable levels based on the CAPSSI-11 standard (LOS E or better) during both peak hours.

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Table 4
Existing Intersection Levels of Service - City of San Jose Method

Intersection	Peak Hour	Count Date	V/C	LOS
I-280/Moorpark	AM	4/9/97	0.357	A
	PM	10/96	0.439	A
I-880/Stevens Creek	AM	4/15/97	0.228	A
	PM	10/96	0.343	A
Bascom/Moorpark	AM	4/17/97	0.799	C
	PM	4/17/97	0.744	C
Bascom/Naglee	AM	10/31/95	0.746	C
	PM	4/17/97	0.639	B
Bascom/San Carlos	AM	4/15/97	0.849	D
	PM	4/15/97	0.784	C
Bellerose/Stevens Creek	AM	6/23/95	0.409	A
	PM	4/17/97	0.598	A
Hamilton/Winchester	AM	4/17/97	0.740	C
	PM	4/17/97	0.913	E
Hedding/Monroe	AM	4/17/97	0.486	A
	PM	4/17/97	0.532	A
Hedding/Winchester	AM	4/17/97	0.534	A
	PM	4/17/97	0.647	B
Monroe/Stevens Creek	AM	4/9/97	0.488	A
	PM	7/8/97	0.757	C
Moorpark/San Tomas	AM	4/17/97	0.914	E
	PM	10/96	1.003	F
San Tomas/Stevens Creek	AM	4/17/97	0.826	D
	PM	7/9/97	1.032	F
Moorpark/Winchester	AM	10/1/97	0.893	D
	PM	7/10/97	0.771	C
Saratoga/Stevens Creek	AM	5/21/96	0.578	A
	PM	10/96	0.786	C
Stevens Creek/Emporium	AM	4/15/97	0.417	A
	PM	4/15/97	0.496	A
Stevens Creek/Redwood	AM	4/10/97	0.395	A
	PM	4/10/97	0.475	A
Stevens Creek/Winchester	AM	4/16/97	0.640	B
	PM	7/10/97	0.850	D
Tisch/Winchester	AM	4/16/97	0.371	A
	PM	4/16/97	0.675	B
Williams/Winchester	AM	4/16/97	0.752	C
	PM	4/16/97	0.502	A
Winchester/Olsen	AM	4/17/97	0.424	A
	PM	4/17/97	0.476	A
Winchester/Olin	AM	4/16/97	0.427	A
	PM	4/16/97	0.440	A

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Table 5
Existing Intersection Levels of Service - CAPSSI-11 Method

Intersection	Peak Hour	Count Date	Average Intersection Delay[a]	LOS
I-280/Moorpark	AM	4/9/97	16	C
	PM	10/96	17	C
I-880/Stevens Creek	AM	4/15/97	14	B
	PM	10/96	16	C
San Tomas/Stevens Creek	AM	4/17/97	37	D
	PM	7/9/97	53	E
San Tomas/Moorpark	AM	4/17/97	37	D
	PM	10/96	35	D
Saratoga/Stevens Creek	AM	5/21/96	31	D
	PM	10/96	36	D
Stevens Creek/Winchester	AM	4/16/97	29	D
	PM	10/96	37	D

Whole intersection average delay expressed in seconds per vehicle.

Existing Freeway Level of Service

The CMP requires an analysis of traffic conditions on freeway segments that could potentially be impacted by project traffic. Traffic conditions were therefore evaluated for segments of I-280, I-880, and SR 17. The freeway analysis is based on the volume-to-capacity (V/C) ratio of each directional freeway segment. The range of acceptable conditions for freeways is LOS E or better, which corresponds to a V/C of 0.999 or lower.

The analysis of existing freeway conditions was based on data provided in *1996 Traffic Volumes on California State Highways* and in the *1995 Annual HOVL Report*, both published by Caltrans. The CMP dictates an assumed freeway capacity of 2,000 vehicles per hour per lane and requires that conditions be analyzed separately for high-occupancy-vehicle (HOV) lanes and mixed-flow (non-HOV) lanes. The existing levels of service on the study segments are shown in Table 6. The results show that the mixed-flow lanes of all 16 study segments currently operate at an unacceptable LOS F during at least one of the peak-hours.

The existing conditions reported here warrant some qualification. The validity of the analysis depends on the accuracy and validity of the traffic volumes used. The only traffic volumes made available by Caltrans are the annually published traffic volumes. These volumes are typically shown to be higher than could possibly be sustained by the roadways. Generally, any volumes that produce a V/C over 1.20 are suspect, since any V/C ratio greater than 1.0 may not be meaningful since the segment is already at capacity. As shown in Table 6, the V/C ratio is shown to exceed 1.20 on nine of the sixteen segments, with the V/C ratio reaching nearly 1.70 on one segment. The volumes therefore do not provide meaningful results. The results are reported here because the CMP requires it and because there is no other source for existing freeway traffic volumes.

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Table 6
Existing Freeway Level of Service

								Mixed-Flow Lane Traffic				HOV Lane Traffic Volumes[d]			
Freeway	Segment	Direction	Lanes	Peak Hour	% MFV[a]	Total Volume	Split Volume	Capacity[b]	Volume	V/C	LOS	Capacity[b]	Volume	V/C	LOS
I-280	Lawrence to Saratoga	SB	3+HOV+AUX	AM	0.94	16,000	5,920	7,000	5,565	0.795	D	2,000	355	0.178	A
				PM	0.88		10,080		8,870	1.267	F		1,210	0.605	C
I-280	Saratoga to Winchester	SB	3+HOV+AUX	AM	0.94	20,200	7,474	7,000	7,026	1.004	F	2,000	448	0 224	A
				PM	0.88		12,726		11,199	1.600	F		1,527	0.764	C
I-280	Winchester to I-880	SB	3+HOV	AM	0.94	18,300	6,771	6,000	6,365	1.061	F	2,000	406	0.203	A
				PM	0.88		11,529		10,146	1.691	F		1,383	0.692	C
I-280	I-880 to Bascom	SB	4+HOV	AM	0.94	18,500	8,510	8,000	7,999	1.000	F	2,000	511	0.255	A
				PM	0.88		9,990		8,791	1.099	F		1,199	0.599	C
I-280	Bascom to Meridian	SB	4	AM	1.00	18,400	8,464	8,000	8,464	1.058	F	N/A	N/A	N/A	N/A
				PM	1.00		9,936		9,936	1.242	F				
I-280	Meridian to Bascom	NB	4+AUX	AM	1.00	18,400	10,304	9,000	10,304	1.145	F	N/A	N/A	N/A	N/A
				PM	1.00		8,096		8,096	0.900	D				
I-280	Bascom to I-880	NB	4+HOV+AUX	AM	0.88	18,500	10,360	9,000	9,117	1.013	F	2,000	1,243	0.622	C
				PM	0.94		8,140		7,652	0.850	D		488	0.244	A
I-280	I-880 to Winchester	NB	3+HOV	AM	0.88	18,300	10,614	6,000	9,340	1.557	F	2,000	1,274	0.637	C
				PM	0.94		7,686		7,225	1.204	F		461	0.231	A
I-280	Winchester to Saratoga	NB	3+HOV+AUX	AM	0.88	20,200	11,716	7,000	10,310	1.473	F	2,000	1,406	0.703	C
				PM	0.94		8,484		7,975	1.139	F		509	0.255	A
I-280	Saratoga to Lawrence	NB	3+HOV+AUX	AM	0.88	16,000	9,280	7,000	8,166	1.167	F	2,000	1,114	0.557	C
				PM	0.94		6,720		6,317	0.902	D		403	0.202	A
I-880	Bascom to Stevens Creek	SB	3+AUX	AM	1.00	12,200	4,758	7,000	4,758	0.680	C	N/A	N/A	N/A	N/A
				PM	1.00		7,442		7,442	1.063	F				
I-880	Stevens Creek to I-280	SB	3	AM	1.00	12,200	4,758	6,000	4,758	0.793	D	N/A	N/A	N/A	N/A
				PM	1.00		7,442		7,442	1.240	F				
SR 17	I-280 to Hamilton	SB	3+2AUX	AM	1.00	13,700	5,480	8,000	5,480	0.685	C	N/A	N/A	N/A	N/A
				PM	1.00		8,220		8,220	1.028	F				
SR 17	Hamilton to I-280	NB	3+AUX	AM	1.00	13,700	9,316	7,000	9,316	1.331	F	N/A	N/A	N/A	N/A
				PM	1.00		4,384		4,384	0.626	C				
I-880	I-280 to Stevens Creek	NB	3	AM	1.00	12,200	8,174	6,000	8,174	1.362	F	N/A	N/A	N/A	N/A
				PM	1.00		4,026		4,026	0.671	C				
I-880	Stevens Creek to Bascom	NB	3+AUX	AM	1.00	12,200	8,174	7,000	8,174	1.168	F	N/A	N/A	N/A	N/A
				PM	1.00		4,026		4,026	0.575	C				

[a] Mixed-Flow-Vehicles (MFV) = Percent of all vehicles that are in mixed-flow lanes. Source: Caltrans Annual HOVL Report, December 1995.
[b] Capacity of mixed-flow and HOV lanes, assuming 2,000 vphpl.
[c] Traffic volumes in mixed-flow lanes = total volume x MFV fraction.
[d] Traffic volumes in HOV lanes = total volume - mixed-flow volume.

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Existing Interchange Ramp Analysis

Traffic conditions were analyzed for the eight freeway ramps at the I-880/Stevens Creek interchange and for the two freeway ramps at the I-280/Winchester interchange. Existing traffic volumes on the ramps were established from traffic counts conducted specifically for this study (see Appendix A). Twenty-four-hour tube counts were conducted on the I-880/Stevens Creek ramps over a continuous period from September 4 to September 12, 1997 and from October 1 to October 6, 1997. The existing volumes on the I-280/Winchester ramps were established from peak-hour intersection turning-movement counts conducted at the adjacent intersections. The ramp volumes are included in Appendix A.

Traffic conditions on the ramps were analyzed for the weekday AM and PM peak hours and also for the Saturday peak hour. There are several reasons to include the Saturday peak hour in the ramp analysis. First, the shopping center use generates the most trips on Saturday, rather than during the weekday commute, so that in the immediate vicinity of Town & Country the total traffic could be greater on Saturday. Second, the I-880/Stevens Creek interchange is located directly adjacent to Town & Country. Third, the ramp counts revealed that on most of the ramps the Saturday peak-hour volumes are higher than the weekday peak-hour volumes. In order to ensure that the analysis does in fact include the worst peak-hour conditions, the Saturday peak hour was therefore included.

The interchange ramps were evaluated on the basis of volume-to-capacity utilization of the ramps. Ramp operations are not addressed by the CMP or the City's LOS Policy, but it was assumed for this study that the acceptable range of conditions on ramps is LOS D or better, corresponding to a V/C of 0.899 or less. The ramp capacity varies with design speed of the ramp. Diagonal ramps permit higher speeds than loop ramps and thus have a higher capacity. The assumed ramp capacity is 2,000 vehicles per hour per lane (vphpl) for the diagonal ramps and 1,800 vphpl for the loop ramps, as specified in the Transportation Research Board's *1994 Highway Capacity Manual*. The results of the ramp analysis are summarized in Table 7. The results show that all ten freeway ramps analyzed operate at an acceptable LOS D or better during all peak hours.

Table 7
Existing Interchange Ramps Level of Service-CMP Method

Interchange	Ramp	Type	Capacity	Period	Volume	V/C	LOS
I-880/Stevens Creek	SB to WB	Diagonal	2,000	AM	493	0.247	A
			2,000	PM	628	0.314	A
			2,000	Sat	850	0.425	A
I-880/Stevens Creek	SB to EB	Loop	1,800	AM	136	0.076	A
			1,800	PM	168	0.093	A
			1,800	Sat	179	0.099	A
I-880/Stevens Creek	WB to NB	Diagonal	2,000	AM	218	0.109	A
			2,000	PM	179	0.090	A
			2,000	Sat	234	0.117	A
I-880/Stevens Creek	WB to SB	Loop	1,800	AM	160	0.089	A
			1,800	PM	354	0.197	A
			1,800	Sat	270	0.150	A
I-880/Stevens Creek	NB to EB	Diagonal	2,000	AM	272	0.136	A
			2,000	PM	272	0.136	A
			2,000	Sat	501	0.251	A
I-880/Stevens Creek	NB to WB	Loop	1,800	AM	1,004	0.558	A
			1,800	PM	1,051	0.584	A
			1,800	Sat	1,245	0.692	B
I-880/Stevens Creek	EB to SB	Diagonal	2,000	AM	483	0.242	A
			2,000	PM	1,374	0.687	B
			2,000	Sat	1,364	0.682	B
I-880/Stevens Creek	EB to NB	Loop	1,800	AM	252	0.140	A
			1,800	PM	504	0.280	A
			1,800	Sat	750	0.417	A
I-280/Winchester	to NB	Diagonal	2,000	AM	713	0.357	A
			2,000	PM	729	0.365	A
			2,000	Sat	689	0.345	A
I-280/Winchester	from SB	Diagonal	2,000	AM	769	0.385	A
			2,000	PM	1,068	0.534	A
			2,000	Sat	865	0.433	A

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Background Conditions

The following discussion describes background conditions in the project area. Background conditions are defined as conditions just prior to completion of the proposed development. Traffic volumes for background conditions include volumes from existing traffic counts plus traffic generated by approved but-not-yet-constructed developments in the area. This section first describes the procedure used to determine the background traffic volumes. Then, the results of the level of service calculations are presented.

Background Traffic Estimates

The background traffic volumes were estimated by adding existing volumes, growth and Approved Trip Inventory (ATI) volumes. Specifically, the existing volumes were increased by a growth factor of 0.3 per month for any counts over six months old, from the date of the count to September 1997. Traffic from approved but not yet constructed projects included in the ATI were added to these volumes.

Background Intersection Levels of Service- City of San Jose

Intersection level of service calculations were then conducted using background volumes. With buildout of already approved projects, more traffic will use intersections in the study area. Four of the study intersections would operate at an unacceptable LOS E or worse during at least one of the peak-hours under background conditions. The intersection of Hamilton Avenue and Winchester Boulevard would operate at LOS E in the PM peak-hour. The intersection of Moorpark Avenue and San Tomas Expressway would operate at LOS E in the AM peak-hour and at LOS F in the PM peak-hour. The intersection of San Tomas Expressway and Stevens Creek Boulevard would operate at LOS F in the PM peak-hour. The intersection of Moorpark Avenue and Winchester Boulevard would operate at LOS E in the AM peak-hour. The results of the City of San Jose analysis are presented in Table 8.

Table 8
Background Intersection Levels of Service - City of San Jose Method

ntersection	Peak Hour	V/C	LOS
I-280/Moorpark	AM	0.363	A
	PM	0.457	A
I-880/Stevens Creek	AM	0.254	A
	PM	0.386	A
Bascom/Moorpark	AM	0.804	D
	PM	0.747	C
Bascom/Naglee	AM	0.804	D
	PM	0.646	B
Bascom/San Carlos	AM	0.861	D
	PM	0.827	D
Bellerose/Stevens Creek	AM	0.454	A
	PM	0.628	B
Hamilton/Winchester	AM	0.740	C
	PM	0.913	E
Hedding/Monroe	AM	0.486	A
	PM	0.532	A
Hedding/Winchester	AM	0.536	A
	PM	0.647	B
Monroe/Stevens Creek	AM	0.467	A
	PM	0.819	D
Moorpark/San Tomas	AM	0.914	E
	PM	1.033	F
San Tomas/Stevens Creek	AM	0.826	D
	PM	1.035	F
Moorpark/Winchester	AM	0.909	E
	PM	0.798	C
Saratoga/Stevens Creek	AM	0.606	B
	PM	0.813	D
Stevens Creek/Emporium	AM	0.420	A
	PM	0.519	A
Stevens Creek/Redwood	AM	0.396	A
	PM	0.546	A
Stevens Creek/Winchester	AM	0.651	B
	PM	0.860	D
Tisch/Winchester	AM	0.414	A
	PM	0.718	C
Williams/Winchester	AM	0.752	C
	PM	0.502	A
Winchester/Olsen	AM	0.428	A
	PM	0.480	A
Winchester/Olin	AM	0.431	A
	PM	0.444	A

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One regional Santa Clara intersection is projected to operate at unacceptable levels (LOS F) under background conditions. The intersection of San Tomas Expressway and Stevens Creek Boulevard is projected to operate at LOS F during the PM peak hour under background conditions. The other regional Santa Clara intersections will continue to operate at acceptable levels. The results of the Santa Clara analysis and the analysis for three regional intersections in the City of San Jose are presented in Table 9.

Table 9
Background Intersection Levels of Service - CAPSSI-11 Method

Intersection	Peak Hour	Average Intersection Delay[a]	LOS
I-280/Moorpark	AM	16	C
	PM	17	C
I-880/Stevens Creek	AM	16	C
	PM	17	C
San Tomas/Stevens Creek	AM	37	D
	PM	54	E
San Tomas/Moorpark	AM	37	D
	PM	37	D
Saratoga/Stevens Creek	AM	32	D
	PM	36	D
Stevens Creek/Winchester	AM	29	D
	PM	40	D

[a] Whole intersection average delay expressed in seconds per vehicle.

Background Freeway Analysis

The Center for Urban Analysis (CUA) traffic model, which is the Santa Clara County traffic model sanctioned by the CMP, was used to produce forecasts of future background traffic. The model forecasts of background traffic include as a component the existing volume of traffic on the freeways. The forecasts are, however, independent of the existing traffic "counts" on which the existing freeway analysis is based. The background freeway analysis is therefore free from the inaccuracies inherent in the existing freeway analysis. The freeway traffic volumes are included in Appendix A.

As described previously, the assumed freeway capacity is 2,000 vehicles per hour per lane (vphpl), as prescribed by the CMP. The results of the background freeway analysis are summarized in Table 10. The results show that on 9 of the 16 freeway segments the mixed-flow lanes would operate at an unacceptable LOS F during at least one of the peak hours under background conditions.

Table 10
Background Freeway Segment Level of Service

				Background Traffic Volumes (a)							
				Mixed-Flow Lane Traffic Volumes				HOV Lane Traffic Volumes			
Freeway	Segment	Direction	Peak Hour	Capacity	Volume	V/C	LOS	Capacity	Volume	V/C	LOS
I-280	Lawrence to Saratoga	SB	AM	7,000	6,957	0.99	E	2,000	457	0.23	A
			PM		7,421	1.06	F		770	0.39	B
I-280	Saratoga to Winchester	SB	AM	7,000	7,156	1.02	F	2,000	396	0.20	A
			PM		7,252	1.04	F		638	0.32	A
I-280	Winchester to I-880	SB	AM	6,000	4,251	0.71	C	2,000	336	0.17	A
			PM		4,284	0.71	C		564	0.28	A
I-280	I-880 to Bascom	SB	AM	8,000	6,877	0.86	D	2,000	476	0.24	A
			PM		7,166	0.90	D		663	0.33	A
I-280	Bascom to Meridian	SB	AM	8,000	7,356	0.92	D	N/A	0	N/A	N/A
			PM		7,829	0.98	E		0	N/A	N/A
I-280	Meridian to Bascom	NB	AM	9,000	7,713	0.86	D	N/A	0	N/A	N/A
			PM		7,270	0.81	D		0	N/A	N/A
I-280	Bascom to I-880	NB	AM	9,000	8,435	0.94	E	2,000	439	0.22	A
			PM		7,894	0.88	D		506	0.25	A
I-280	I-880 to Winchester	NB	AM	6,000	5,572	0.93	D	2,000	465	0.23	A
			PM		5,059	0.84	D		580	0.29	A
I-280	Winchester to Saratoga	NB	AM	7,000	7,531	1.08	F	2,000	488	0.24	A
			PM		7,206	1.03	F		518	0.26	A
I-280	Saratoga to Lawrence	NB	AM	7,000	7,040	1.01	F	2,000	465	0.23	A
			PM		6,717	0.96	E		500	0.25	A
I-880	Bascom to Stevens Creek	SB	AM	7,000	4,970	0.71	C	N/A	N/A	N/A	N/A
			PM		7,576	1.08	F		N/A	N/A	N/A
I-880	Stevens Creek to I-280	SB	AM	6,000	3,449	0.57	C	N/A	N/A	N/A	N/A
			PM		6,109	1.02	F		N/A	N/A	N/A
SR 17	I-280 to Hamilton	SB	AM	8,000	5,233	0.65	C	N/A	N/A	N/A	N/A
			PM		8,508	1.06	F		N/A	N/A	N/A
SR 17	Hamilton to I-280	NB	AM	7,000	7,520	1.07	F	N/A	N/A	N/A	N/A
			PM		5,330	0.76	C		N/A	N/A	N/A
I-880	I-280 to Stevens Creek	NB	AM	6,000	5,997	1.00	F	N/A	N/A	N/A	N/A
			PM		3,626	0.60	C		N/A	N/A	N/A
I-880	Stevens Creek to Bascom	NB	AM	7,000	6,888	0.98	E	N/A	N/A	N/A	N/A
			PM		5,095	0.73	C		N/A	N/A	N/A

Background traffic volumes and HOVL proportions are based on 2010 CUA model projections.

Background Interchange Ramp Analysis

Ramp volumes under background conditions were estimated by adding trips from approved projects to existing ramp volumes. The ramp volumes are included in Appendix G. The results of the ramp analysis are summarized in Table 11. The results show that all ten freeway ramps analyzed would operate at an acceptable LOS D or better during all peak hours.

Table 11
Background Interchange Ramp Levels of Service

Interchange	Ramp	Type	Capacity	Period	Volume	V/C	LOS
I-880/Stevens Creek	SB to WB	Diagonal	2,000	AM	639	0.320	A
			2,000	PM	682	0.341	A
			2,000	Sat	904	0.452	A
I-880/Stevens Creek	SB to EB	Loop	1,800	AM	136	0.076	A
			1,800	PM	168	0.093	A
			1,800	Sat	179	0.099	A
I-880/Stevens Creek	WB to NB	Diagonal	2,000	AM	218	0.109	A
			2,000	PM	179	0.090	A
			2,000	Sat	234	0.117	A
I-880/Stevens Creek	WB to SB	Loop	1,800	AM	160	0.089	A
			1,800	PM	354	0.197	A
			1,800	Sat	270	0.150	A
I-880/Stevens Creek	NB to EB	Diagonal	2,000	AM	272	0.136	A
			2,000	PM	272	0.136	A
			2,000	Sat	501	0.251	A
I-880/Stevens Creek	NB to WB	Loop	1,800	AM	1,101	0.612	B
			1,800	PM	1,144	0.636	B
			1,800	Sat	1,338	0.743	C
I-880/Stevens Creek	EB to SB	Diagonal	2,000	AM	527	0.264	A
			2,000	PM	1,513	0.757	C
			2,000	Sat	1,503	0.752	C
I-880/Stevens Creek	EB to NB	Loop	1,800	AM	318	0.177	A
			1,800	PM	531	0.295	A
			1,800	Sat	777	0.432	A
I-280/Winchester	to NB	Diagonal	2,000	AM	757	0.379	A
			2,000	PM	768	0.384	A
			2,000	Sat	728	0.364	A
I-280/Winchester	from SB	Diagonal	2,000	AM	785	0.393	A
			2,000	PM	1,080	0.540	A
			2,000	Sat	877	0.439	A

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2. Traffic Impacts

Thresholds of Significance

For the purposes of this project, a traffic impact is considered to be significant if it will:

- cause a City of San Jose intersection to operate below LOS D, or cause an impact of greater than one percent at a City of San Jose intersection already operating below LOS D; or
- cause a regional Santa Clara intersection to operate below LOS E, or cause an increased delay of more than four seconds at a City of Santa Clara intersection already operating below LOS E; or
- cause a freeway segment to operate at LOS F, or contribute traffic in excess of 1% of segment capacity to a freeway segment already operating at LOS F.

Project Traffic Estimates

The amount of traffic associated with a project is estimated using a three-step process: (1) trip generation, (2) trip distribution, and (3) trip assignment. In the first step, the amount of traffic entering and exiting the site is estimated on both a daily and a peak-hour basis. In the second step, the directions the trips use to approach and depart the site are estimated. The trips are assigned to specific streets and intersections in the third step.

Trip Generation

The amount of traffic added to the roadway network by a particular development is estimated by applying the applicable (based on type of land use) trip generation rates to the size of the development. The standard trip generation rates are those published in the Institute of Transportation Engineers (ITE), *Trip Generation*, fifth edition.

Trip generation for retail uses are typically adjusted to account for pass-by trips. Pass-by trips are trips that would already be on the adjacent roadways (and are therefore already counted in the background traffic) but would turn into the site while passing by. Justification for applying the pass-by trip reduction is founded on the observation that such retail traffic is not actually generated by the retail development, but is already part of the ambient traffic levels. Pass-by trips are therefore excluded from the traffic projections. A pass-by trip reduction of 32 percent was applied to the existing retail uses and a pass-by trip reduction of 25 percent was applied to the proposed retail uses (note that the reduction decreases with increasing size of the retail use). The trip generation for the proposed retail and residential uses was further reduced by 10 percent to reflect an internalization of trips within the site.

With the trip generation rates and reductions applied to the proposed development as indicated, the project as proposed is estimated to generate a total of 14,520 daily trips with 728 trips occurring during the AM peak-hour (269 inbound and 459 outbound) and 1,133 trips occurring during the PM peak-hour (647 inbound and 486 outbound). The trip generation estimates are presented in Table 12.

Table 12
Trip Generation Estimates for Town and Country Shopping Center

Project Description	Size (1,000 s.f.)	Daily Rate	Daily Trips	AM Peak Hour[a]						PM Peak Hour[a]					
				Peak-Hour Rate	Capture Reduction	Pass-By Reduction	In	Out	Total	Peak-Hour Rate	Capture Reduction	Pass-By Reduction	In	Out	Total
Shopping Center (Proposed)	600	36.4	19,656	0.78	10%	0%	265	156	421	3.4	10%	25%	663	663	1,326
Less Shopping Center (Existing)	285	48	13,680	1.06	0%	0%	190	112	302	4.51	0%	32%	437	437	874
Added Trips From Shopping Center			5,976				75	44	119				226	226	452
Residential Dwelling Units	1200	6.3	6,804	0.44	10%	0%	114	361	475	0.49	10%	0%	339	191	529
Limited-Service Hotel	200	8.7	1,740	0.67	0%	0%	80	54	134	0.76	0%	0%	82	70	152
Net Added Trips			14,520				269	459	728				647	486	1,133

[a] Peak-hour trip generation totals reflect reductions for internal capture and pass-by trips.

Source: Rates per 1,000 s.f. or per d.u., from ITE *Trip Generation*, 5th Edition, 1991.

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The traffic analysis evaluates a development scenario that includes replacement of the existing 285,000 s.f. of retail with 600,000 s.f. of retail, and the addition of 1,200 units of residential, and two 100-room hotels. The traffic analysis also evaluated the potential impacts of eliminating the existing auto dealership and allowing the entire site to be developed with a slightly greater amount of retail commercial development, or a total of 650,000 s.f.

As described in Appendix A, the existing auto dealership is the "worst case" scenario. Replacing the auto dealership with 50,000 s.f. of retail would generate fewer peak hour impacts. Should this variation in land use ever be implemented, it would have less traffic impact than retaining the car dealership.

Trip Distribution

The trip distribution pattern was estimated based on existing travel patterns on the surrounding roadways and the relative locations of complementary land uses. A graphic representation of the trip distribution to various roadways is found on Figure 12.

Trip Assignment

The trips generated by the proposed development were assigned to the roadway system based on the directions of approach and departure discussed above. The project trip assignments for the AM and PM peak hours are found on Figure 13.

Project Intersection Levels of Service

The peak-hour assignments for the proposed development were added to the background traffic volumes to achieve traffic volumes for project conditions. Intersection level of service calculations were conducted to evaluate the impacts of the proposed project. Background conditions served as a base from which the impacts were evaluated. The peak-hour trip assignments for the proposed development were added to the background volumes to yield project volumes. The estimated background plus project traffic volumes are presented in Appendix A. The results of the intersection level of service calculations are summarized in Table 13. The level of service calculation sheets are included in Appendix A.

City of San Jose Methodology

With the addition of project traffic, five of the study intersections would operate at an unacceptable LOS E or worse during at least one of the peak-hours under project conditions. With the exception of the intersections of Moorpark Avenue/Winchester Boulevard, and Stevens Creek Boulevard/Winchester Boulevard, the project will not add one percent or more to the critical movement volume and will not, therefore, have a significant adverse impact.

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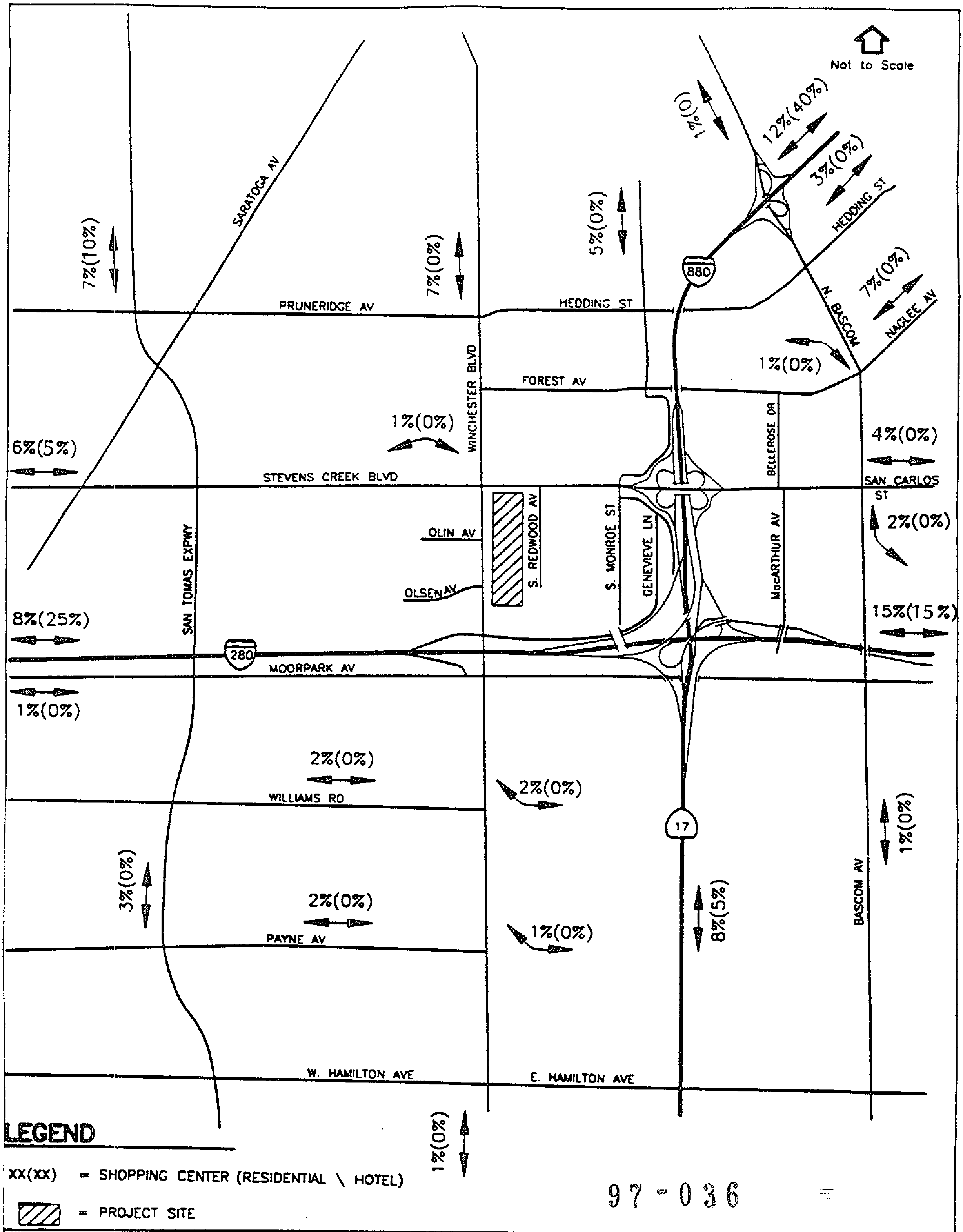

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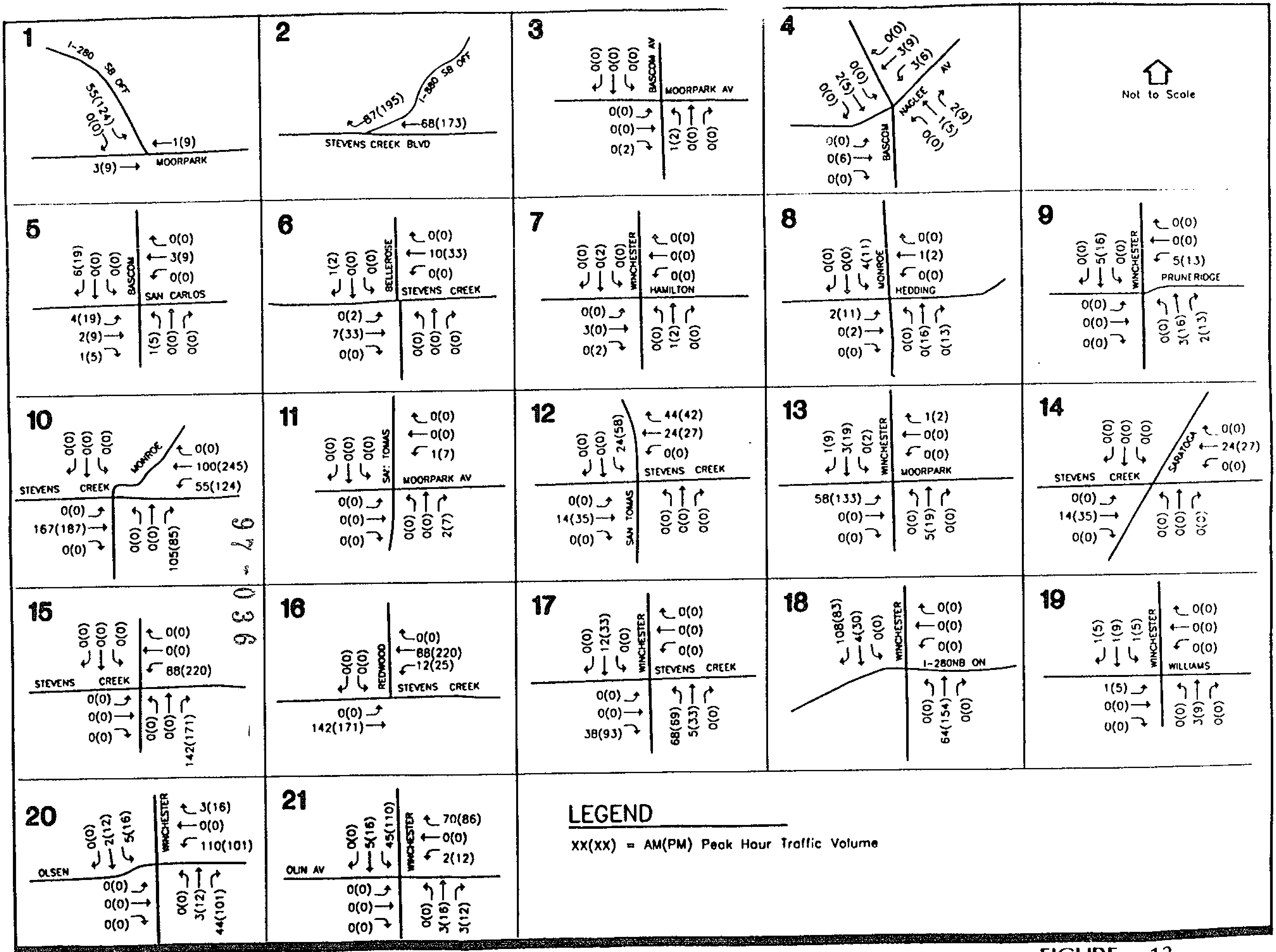
PROJECT TRIP DISTRIBUTION

FIGURE 12



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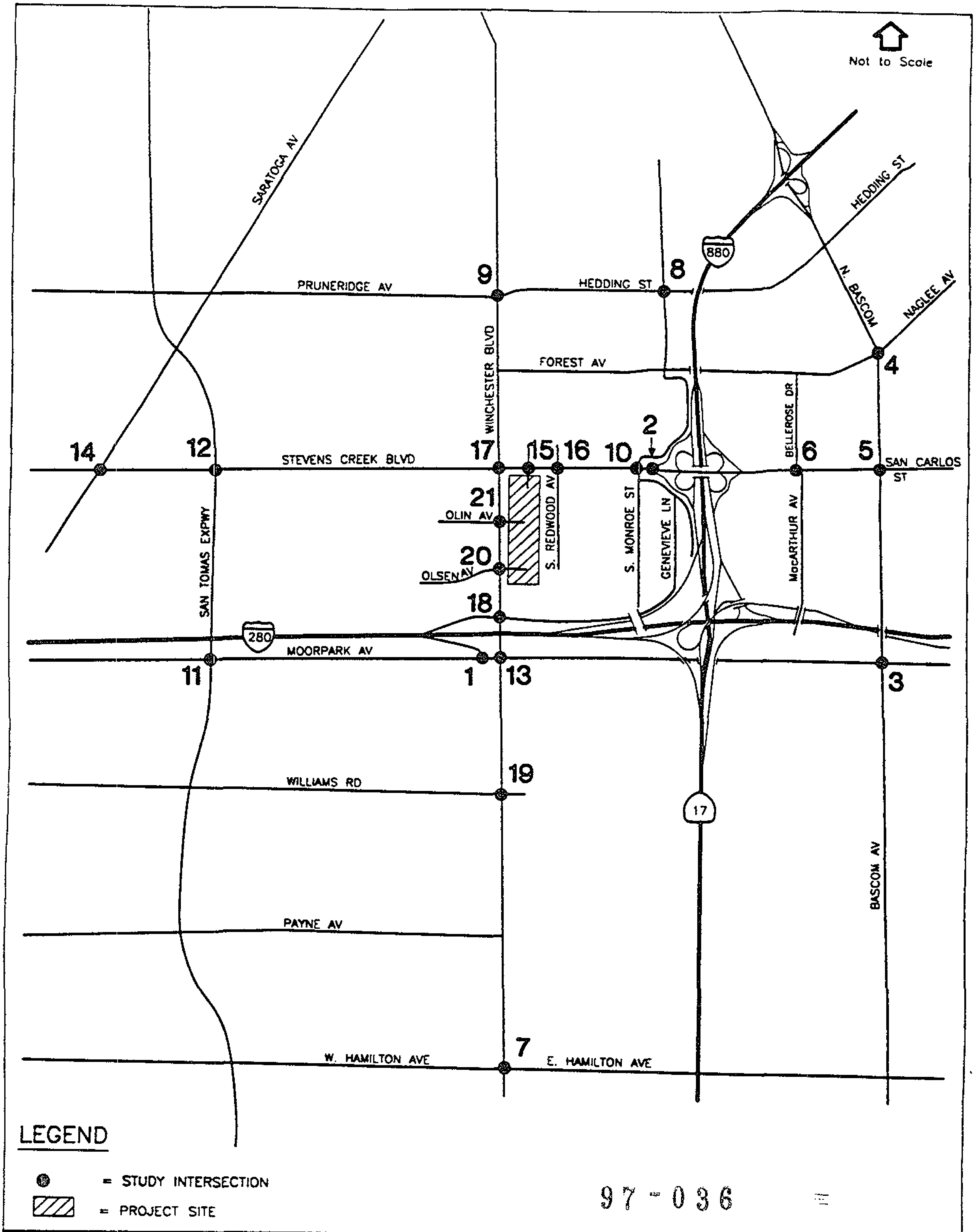
PROJECT TRIP ASSIGNMENTS

FIGURE 13



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STUDY INTERSECTION LOCATIONS

FIGURE 14

The intersection of Moorpark /Winchester Boulevard will operate at LOS E during the AM peak hour under background conditions. With the addition of project-generated traffic, the critical movement delay at the intersection will increase by one percent or more during the AM peak hour.

The intersection of Stevens Creek Boulevard/Winchester Boulevard was evaluated as operating at LOS D during the PM peak hour under background conditions. With the addition of project generated traffic, the level of service at this intersection will drop to LOS E during the PM peak hour, as shown in Table 13.

- **Development of the project will cause one City of San Jose intersection to operate below LOS D during the AM peak hour, and will increase the critical movement delay at another intersection already operating below LOS D by one percent or more during both AM and PM peak hours. (Significant Impact)**

CAPSSI-11 Methodology

The results of the project conditions analysis using the CAPSSI-11 method are shown in Table 14. The results show that all of the CAPSSI-11study intersections would operate at an acceptable LOS E or better during both peak-hours under project conditions. The intersection level of service calculation sheets for the CAPSSI-11 method are included in Appendix A.

- **The project will not cause any regional intersection in Santa Clara to deteriorate to LOS F, and does not add four-seconds increase delay to any intersection already at LOS F. (Less Than Significant Impact)**

Project Freeway Analysis

Project traffic conditions were analyzed for the 16 previously identified freeway segments. Project traffic volumes were estimated by adding to the base model forecasts the estimated freeway trips from the Town & Country redevelopment project. The freeway traffic volumes are included in Appendix A.

As described previously, the assumed freeway capacity is 2,000 vehicles per hour per lane (vphpl), as prescribed by the CMP. The results of the project freeway analysis are summarized in Table 15. The results show that on 10 of the 16 freeway segments the mixed-flow lanes would operate at an unacceptable LOS F during at least one of the peak hours under project conditions. The results also show that on 6 of these 10 study segments the volume of project traffic would constitute at least one percent of freeway capacity. The following freeway segments would operate at an unacceptable level with the addition of one percent or more of the project traffic:

I-280 southbound from Lawrence Expressway to Saratoga Avenue
I-280 southbound from Saratoga Avenue to Winchester Boulevard
I-280 northbound from Winchester Boulevard to Saratoga Avenue

Table 13
Weekday Project Intersection Levels of Service-City of San Jose Method

		Background		Project Conditions		
Intersection	Peak Hour	V/C	LOS	V/C	LOS	% INC.
I-280/Moorpark	AM	0.363	A	0.379	A	4.52
	PM	0.457	A	0.493	A	8.26
I-880/Stevens Creek	AM	0.254	A	0.269	A	5.91
	PM	0.386	A	0.421	A	9.00
Bascom/Moorpark	AM	0.804	D	0.804	D	0.11
	PM	0.747	C	0.747	C	0.00
Bascom/Naglee	AM	0.804	D	0.803	D	0.17
	PM	0.646	B	0.654	B	1.12
Bascom/San Carlos	AM	0.861	D	0.865	D	0.28
	PM	0.827	D	0.835	D	0.72
Bellerose/Stevens Creek	AM	0.454	A	0.457	A	1.00
	PM	0.628	B	0.641	B	2.29
Hamilton/Winchester	AM	0.740	C	0.740	C	0.04
	PM	0.913	E	0.913	E	0.06
Hedding/Monroe	AM	0.486	A	0.487	A	0.24
	PM	0.532	A	0.545	A	2.24
Hedding/Winchester	AM	0.536	A	0.540	A	0.53
	PM	0.647	B	0.660	B	1.69
Monroe/Stevens Creek	AM	0.467	A	0.528	A	14.44
	PM	0.819	D	0.899	D	10.76
Moorpark/San Tomas	AM	0.914	E	0.914	E	0.00
	PM	1.033	F	1.036	F	0.22
San Tomas/Stevens Creek	AM	0.831	D	0.842	D	1.31
	PM	1.035	F	1.040	F	0.98
Moorpark/Winchester	AM	0.909	E	**0.924**	**E**	**1.68**
	PM	0.798	C	0.832	D	4.63
Saratoga/Stevens Creek	AM	0.606	B	0.613	B	1.23
	PM	0.813	D	0.822	D	1.48
Stevens Creek/Emporium	AM	0.420	A	0.420	A	0.00
	PM	0.519	A	0.589	A	11.78
Stevens Creek/Redwood	AM	0.396	A	0.416	A	5.39
	PM	0.546	A	0.596	A	9.37
Stevens Creek/Winchester	AM	0.651	B	0.654	B	0.25
	PM	0.860	D	**0.915**	**E**	**3.41**
Tisch/Winchester	AM	0.414	A	0.447	A	9.14
	PM	0.718	C	0.745	C	4.60
Williams/Winchester	AM	0.752	C	0.754	C	0.26
	PM	0.502	A	0.507	A	0.84
Winchester/Olsen	AM	0.428	A	0.490	A	11.23
	PM	0.480	A	0.529	A	6.67
	PM	0.444	A	0.435	A	0.00

*Note: Significant impacts indicated in **bold.**

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Table 14
Weekday Project Intersection Level of Service-CMP Method

		Background		Project Conditions		
Intersection	Peak Hour	Average Intersection Delay[a]	LOS	Average Intersection Delay[a]	LOS	Increase in Critical Movement[b]
I-280/Moorpark	AM	16	C	16	C	0
	PM	17	C	17	C	0
I-880/Stevens Creek	AM	16	C	17	C	1
	PM	17	C	19	C	2
San Tomas/Ste[illegible]ns Creek	AM	37	D	38	D	1
	PM	54	E	55	E	2
Sa[illegible]s/Moorpark	AM	37	D	37	D	0
	PM	37	D	37	D	0
[illegible]oga/Stevens Creek	AM	32	D	32	D	0
	PM	36	D	36	D	0
S[illegible]vens Creek/Winchester	AM	29	D	29	D	0
	PM	40	D	41	E	8

[a] Whole intersection average delay expressed in seconds per vehicle.
[b] Increase in critical movement delay.

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I-280 northbound from Saratoga Avenue to Lawrence Expressway
I-880 southbound from Bascom Avenue to Stevens Creek Boulevard
I-880 northbound from Stevens Creek Boulevard to Bascom Avenue

- **Project traffic will add more than one percent of segment capacity to six freeway segments predicted to operate below LOS E. (Significant Impact)**

Project Interchange Ramp Analysis

Ramp volumes under project conditions were estimated by adding trips from the Town & Country redevelopment project to background ramp volumes. The ramp volumes are included in Appendix A. The results of the ramp analysis are summarized in Table 16. The analysis conducted for the ramps, as for all of the transportation facilities, was on traffic volumes during an average weekday peak hour. In addition to mechanical counts, the ramps were observed by the traffic consultants. During the peak hour period, there can be temporary backups, but all traffic cleared during the counting period, so the volumes represented by these counts are accurate representations of the volume of traffic using the ramp during that peak hour. The results show that all ten freeway ramps analyzed would operate at an acceptable LOS D or better during all peak hours.

- **The addition of project traffic will not deteriorate the operation of any of the ten freeway ramps analyzed to below LOS D. (Less than Significant Impact)**

Saturday Peak-Hour Conditions

The purpose of a traffic analysis is to identify any potential impacts on traffic conditions that would be created by the project. The analysis generally focuses on the weekday AM and PM peak hours because the highest background, or ambient, traffic levels occur during the commute periods. The Town & Country redevelopment project would generate slightly more (one to two percent more) trips during the Saturday peak hour than during the weekday PM peak hour. Furthermore, the Valley Fair expansion, which contributes to traffic under cumulative conditions, would generate approximately 25 percent more trips during the Saturday peak hour than during the weekday PM peak hour. The highest combined (ambient plus project) traffic levels could occur during either the weekday peak hour or the Saturday peak hour.

Traffic counts were conducted at certain study intersections and on nearby freeway ramps during the Saturday peak period. The peak traffic volumes on Saturday were found to occur between approximately 2:30 and 3:30 PM. In addition to mechanical counts, the ramps were observed by the traffic consultants. During the peak hour period, there can be temporary backups, but all traffic cleared during the counting period, so the volumes represented by these counts are accurate representations of the volume of traffic using the ramp during that peak hour.

As shown on Table 17, with the addition of project traffic, one intersection will deteriorate to an unacceptable level using the City of San Jose methodology. The intersection of Monroe Avenue and Stevens Creek Boulevard was evaluated as operating at LOS D during the Saturday peak-hour under background conditions. With the addition of project traffic, this intersection would deteriorate to a LOS E during the Saturday peak-hour.

- **The development of the proposed project will cause a City of San Jose intersection to operate below LOS D during the Saturday peak-hour. (Significant Impact)**

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Table 15
Project Freeway Segment Level of Service

			Background With Project[1]								Town & Country Project Traffic				
			Mixed-Flow Lane Traffic Volumes				HOV Lane Traffic Volumes					Mixed-Flow Lane		HOV Lane	
Segment	Direction	Peak Hour	Capacity	Volume	V/C	LOS	Capacity	Volume	V/C	LOS	Total Volume	Volume	% Capacity	Volume	% Capacity
Lawrence to Saratoga	SB	AM	7,000	7,009	1.00	F	2,000	460	0.23	A	55	52	0.7%	3	0.0%
		PM		7,533	1.08	F		782	0.39	B	124	**112**	**1.6%**	12	0.0%
Saratoga to Winchester	SB	AM	7,000	7,208	1.03	F	2,000	399	0.20	A	55	52	0.7%	3	0.0%
		PM		7,366	1.05	F		648	0.32	A	124	**114**	**1.6%**	10	0.0%
Winchester to I-880	SB	AM	6,000	4,251	0.71	C	2,000	336	0.17	A	0	0	0.0%	0	0.0%
		PM		4,284	0.71	C		564	0.28	A	0	0	0.0%	0	0.0%
I-880 to Bascom	SB	AM	8,000	6,942	0.87	D	2,000	480	0.24	A	69	65	0.8%	4	0.0%
		PM		7,233	0.90	D		669	0.33	A	73	67	0.8%	6	0.0%
Bascom to Meridian	SB	AM	8,000	7,425	0.93	D	N/A	0	N/A	N/A	69	69	0.9%	N/A	N/A
		PM		7,902	0.99	E		0	N/A	N/A	73	73	0.9%	N/A	N/A
Meridian to Bascom	NB	AM	9,000	7,753	0.86	D	N/A	0	N/A	N/A	40	40	0.4%	N/A	N/A
		PM		7,367	0.82	D		0	N/A	N/A	97	97	1.1%	N/A	N/A
Bascom to I-880	NB	AM	9,000	8,473	0.94	E	2,000	441	0.22	A	40	38	0.4%	2	0.0%
		PM		7,985	0.89	D		512	0.26	A	97	91	1.0%	6	0.0%
I-880 to Winchester	NB	AM	6,000	5,572	0.93	D	2,000	465	0.23	A	0	0	0.0%	0	0.0%
		PM		5,059	0.84	D		580	0.29	A	0	0	0.0%	0	0.0%
Winchester to Saratoga	NB	AM	7,000	7,632	1.09	F	2,000	495	0.25	A	108	**101**	**1.4%**	7	0.0%
		PM		7,283	1.04	F		524	0.26	A	83	**77**	**1.1%**	6	0.0%
Saratoga to Lawrence	NB	AM	7,000	7,141	1.02	F	2,000	472	0.24	A	108	**101**	**1.4%**	7	0.0%
		PM		6,794	0.97	E		506	0.25	A	83	77	1.1%	6	0.0%
Bascom to Stevens Creek	SB	AM	7,000	5,057	0.72	C	N/A	N/A	N/A	N/A	87	87	1.2%	N/A	N/A
		PM		7,672	1.10	F		N/A	N/A	N/A	96	**96**	**1.4%**	N/A	N/A
Stevens Creek to I-280	SB	AM	6,000	3,474	0.58	C	N/A	N/A	N/A	N/A	25	25	0.4%	N/A	N/A
		PM		6,140	1.02	F		N/A	N/A	N/A	31	31	0.5%	N/A	N/A
I-280 to Hamilton	SB	AM	8,000	5,258	0.66	C	N/A	N/A	N/A	N/A	25	25	0.3%	N/A	N/A
		PM		8,539	1.07	F		N/A	N/A	N/A	31	31	0.4%	N/A	N/A
Hamilton to I-280	NB	AM	7,000	7,536	1.08	F	N/A	N/A	N/A	N/A	16	16	0.2%	N/A	N/A
		PM		5,369	0.77	C		N/A	N/A	N/A	39	39	0.6%	N/A	N/A
I-280 to Stevens Creek	NB	AM	6,000	6,013	1.00	F	N/A	N/A	N/A	N/A	16	16	0.3%	N/A	N/A
		PM		3,665	0.61	C	N/A	N/A	N/A	N/A	39	39	0.7%	N/A	N/A
Stevens Creek to Bascom	NB	AM	7,000	7,059	1.01	F		N/A	N/A	N/A	171	**171**	**2.4%**	N/A	N/A
		PM		5,226	0.75	C	N/A	N/A	N/A	N/A	131	131	1.9%	N/A	N/A

Background traffic volumes and HOVL proportions are based on 2010 CUA model projections.

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Table 16
Project Interchange Ramp Level of Service

					Background Conditions			Project Conditions		
Interchange	Ramp	Type	Capacity	Period	Volume	V/C	LOS	Volume	V/C	LOS
I-880/Stevens Creek	SB to WB	Diagonal	2,000	AM	639	0.320	A	726	0.363	A
			2,000	PM	682	0.341	A	878	0.439	A
			2,000	Sat	904	0.452	A	1,100	0.550	A
I-880/Stevens Creek	SB to EB	Loop	1,800	AM	136	0.076	A	136	0.076	A
			1,800	PM	168	0.093	A	168	0.093	A
			1,800	Sat	179	0.099	A	179	0.099	A
I-880/Stevens Creek	WB to NB	Diagonal	2,000	AM	218	0.109	A	218	0.109	A
			2,000	PM	179	0.090	A	179	0.090	A
			2,000	Sat	234	0.117	A	234	0.117	A
I-880/Stevens Creek	WB to SB	Loop	1,800	AM	160	0.089	A	160	0.089	A
			1,800	PM	354	0.197	A	354	0.197	A
			1,800	Sat	270	0.150	A	270	0.150	A
I-880/Stevens Creek	NB to EB	Diagonal	2,000	AM	272	0.136	A	272	0.136	A
			2,000	PM	272	0.136	A	272	0.136	A
			2,000	Sat	501	0.251	A	501	0.251	A
I-880/Stevens Creek	NB to WB	Loop	1,800	AM	1,101	0.612	B	1,157	0.643	B
			1,800	PM	1,144	0.636	B	1,280	0.711	C
			1,800	Sat	1,338	0.743	C	1,474	0.819	D
I-880/Stevens Creek	EB to SB	Diagonal	2,000	AM	527	0.264	A	621	0.311	A
			2,000	PM	1,513	0.757	C	1,617	0.809	D
			2,000	Sat	1,503	0.752	C	1,607	0.804	D
I-880/Stevens Creek	EB to NB	Loop	1,800	AM	318	0.177	A	489	0.272	A
			1,800	PM	531	0.295	A	662	0.368	A
			1,800	Sat	777	0.432	A	908	0.504	A
I-280/Winchester	to NB	Diagonal	2,000	AM	757	0.379	A	865	0.433	A
			2,000	PM	768	0.384	A	851	0.426	A
			2,000	Sat	728	0.364	A	811	0.406	A
I-280/Winchester	from SB	Diagonal	2,000	AM	785	0.393	A	840	0.420	A
			2,000	PM	1,080	0.540	A	1,204	0.602	B
			2,000	Sat	877	0.439	A	1,001	0.501	A

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Table 17
Saturday Peak-Hour Intersection Levels of Service—SJ Method

	Existing		Background		Project Conditions		
Intersection	V/C	LOS	V/C	LOS	V/C	LOS	% INC.
Monroe/Stevens Creek	0.815	D	0.870	D	**0.950**	E	**10.00**
Stevens Creek/Winchester	0.818	D	0.826	D	0.884	D	3.78
Stevens Creek/Redwood	0.513	A	0.585	A	0.636	B	8.84
Stevens Creek/Emporium	0.627	B	0.647	B	0.676	B	5.25
Winchester/Olin	0.517	A	0.530	A	0.600	B	8.85
Winchester/Olsen	0.586	A	0.599	A	0.703	C	14.36
Winchester Tisch	0.569	A	0.610	B	0.637	B	5.24

*Note: Significant impacts indicated in **bold.**

Site Access Analysis

The following evaluation of traffic conditions at the site access locations focuses on the Saturday peak hour, when traffic volumes into and out of the site would be highest. The site access analysis includes an evaluation of the site access as proposed, and an evaluation of three site access alternatives which are also allowed by the proposed Planned Development zoning.

Site Access Alternatives

The previous discussion assumed that access would occur only at the existing site access locations— the signalized intersections at Winchester and Olsen, Winchester and Olin, Stevens Creek and Emporium/Town & Country, and the unsignalized right-turn-only driveway on Winchester north of Olin—plus the proposed unsignalized driveway at Redwood Avenue and Hemlock Avenue. For the purpose of the following discussion, this will be called the "proposed project access."[1] The potential traffic impacts of three access alternatives are considered in this section. The access alternatives are as follows: (1) existing access (described above) only, (2) existing access plus secondary access to Dudley Avenue, and (3) existing access plus secondary access to both Redwood Avenue and Dudley Avenue.

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[1] The proposed Planned Development rezoning would also allow the additional access to Dudley and Redwood, although they are not shown on the plans at this time.

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For the purposes of this CEQA analysis, the potential impacts of these access alternatives were evaluated in two ways. Existing ADT volumes on the local streets adjacent to the site were compared with the expected increase in ADT on these streets, and traffic conditions at the existing signalized intersections adjacent to the site were evaluated on the basis of level of service.

Assignment of Project Traffic with Access Alternatives

With different site access available, the assignment of project trips will differ from the project trip assignment assumed previously. This difference in trip assignment would apply only to the intersections located in the immediate vicinity of the site. The project trip assignments for three access alternatives are shown in Appendix A.

Volumes on Local Streets

The local streets adjacent to the site include Redwood Avenue, Hemlock Avenue, Dudley Avenue, and South Baywood Avenue. Counts were conducted on these streets, and the existing ADT volumes are shown in Table 18. The table shows existing volumes are approximately 1,050 daily vehicles on Redwood Avenue just south of Stevens Creek, 1,650 daily vehicles on Hemlock Avenue just west of Monroe Street, 2,000 daily vehicles on South Baywood Avenue just north of Tisch Way, and 450 daily vehicles on Dudley Avenue just north of Tisch Way.

Table 18 also shows that, with the proposed secondary project access to Redwood Avenue, an estimated 410 daily project trips would be added to Redwood Avenue and an estimated 2,090 daily project trips would be added to Hemlock Avenue. No project trips would be added to South Baywood Avenue or Dudley Avenue. With the existing access to the site and no secondary access provided, the project would add no appreciable volume of traffic to Redwood Avenue, Hemlock Avenue, South Baywood Avenue, or Dudley Avenue.

With secondary project access to Dudley Avenue, an estimated 2,130 daily project trips would be added to Dudley Avenue. No project trips would be added to South Baywood Avenue, Redwood Avenue or Hemlock Avenue.

With secondary project access to both Redwood Avenue and Dudley Avenue, an estimated 410 daily project trips would be added to Redwood Avenue, an estimated 810 daily project trips would be added to Hemlock Avenue, and an estimated 2,130 daily project trips would be added to Dudley Avenue. No project trips would be added to South Baywood Avenue.

Table 18
Average Daily Trips (ADT) on Local Streets

		Proposed Project Access		*Secondary Access at Dudley Only*		*Secondary Access at Redwood & Dudley*	
Street	Existing	Project	Existing + Project	Project	Existing + Project	Project	Existing + Project
Redwood Avenue	1,050	410	1,460	0	1,050	410	1,460
Hemlock Avenue	1,637	2,090	3,727	0	1,637	810	2,447
Baywood Avenue	1,999	0	1,999	0	1,999	0	1,999
Dudley Avenue	451	0	451	2,130	2,581	2,130	2,581

Note: Based on weekday counts and weekday project trip estimates.

Intersection Level of Service with Alternative Access

The effects of alternative access on level of service at the surrounding intersections was also evaluated. The City of San Jose intersection level of service method was used to evaluate project conditions and cumulative conditions during the Saturday peak-hour at the following five intersections: Stevens Creek Boulevard and Monroe Street, Stevens Creek Boulevard and Redwood Avenue, Stevens Creek Boulevard and Emporium/Town & Country, Winchester Boulevard and Olsen Drive, and Winchester Boulevard and Tisch Way. The intersection of Winchester Boulevard and Stevens Creek Boulevard and the intersection of Winchester Boulevard and Olin Avenue were excluded form this analysis because conditions at these intersections would be unaffected by the site access alternatives under consideration. The level of service results under the various access alternatives are summarized in Table 19. The level of service calculations can be found in Appendix A.

The results show that, with the existing site access and a secondary access provided, level of service would improve slightly at Stevens Creek and Monroe, level of service would worsen slightly at Stevens Creek and Redwood and at Stevens Creek and Emporium/Town & Country, and level of service would be unchanged at Winchester and Olsen and at Winchester and Tisch.

With secondary access to Dudley Avenue only, level of service would improve slightly at Stevens Creek and Monroe, Winchester and Olsen, and Stevens Creek and Redwood, but level of service would worsen slightly at Winchester and Tisch, and at Stevens Creek and Emporium/Town & Country.

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With secondary access to both Redwood Avenue and Dudley Avenue, level of service would improve slightly at Winchester and Olsen, but would worsen slightly at Winchester and Tisch.

As in the earlier analysis, the intersection of Stevens Creek and Monroe would operate at an unacceptable LOS E during the Saturday peak hour under project conditions with the proposed project access. For all three site access alternatives, traffic conditions at Monroe and Stevens Creek would be an equal or better LOS E. The other four signalized intersections analyzed would operate at an acceptable LOS D or better for all site access alternatives considered.

Table 19
Alternative Access Intersection Levels of Service
Saturday Peak-Hour - SJ Method

	Proposed Project Access		Existing Site Access		Access at Dudley Only		Access at Redwood & Dudley	
	Project Conditions		Project Conditions		Project Conditions		Project Conditions	
Intersection	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS
Monroe/Stevens Creek	0.950	E	0.926	E	0.939	E	0.950	E
Stevens Creek/Redwood	0.636	B	0.645	B	0.634	B	0.636	B
Stevens Creek/Emporium	0.676	B	0.726	C	0.700	C	0.676	B
Winchester/Olsen	0.703	C	0.703	C	0.671	B	0.671	B
Winchester/Tisch	0.637	B	0.637	B	0.640	B	0.640	B

3. Traffic Mitigation Measures

The results of the level of service analyses indicate that the project will have a significant impact on three intersections of local streets, and on six freeway segments. The project proposes mitigation measures for the three local intersections.

Mitigation Measures Proposed by the Project

In this section, the mitigation measures that are proposed by the project to reduce the impacts of the project on the surrounding roadway system are discussed.

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Moorpark Avenue and Winchester Boulevard

- **Improve the west leg of the intersection of Moorpark Avenue and Winchester Boulevard to include the addition of a second exclusive left-turn lane and the conversion of the existing shared through-left turn lane to an exclusive through lane.**

With the implementation of this improvement, the intersection operations would be restored to LOS D.**(Less Than Significant Impact With Mitigation)**

Stevens Creek Boulevard and Monroe Street

- **Improve the intersection of Stevens Creek Boulevard and Monroe Street to include the addition of a fourth eastbound through lane.**

This improvement cannot be accommodated within the existing curb-to-curb width. The implementation of this improvement would entail the removal and reconstruction of the curb, gutter, and sidewalk, repaving and restriping of the west and east approaches in the eastbound direction, and acquisition of 10 feet of right-of -way along the southerly edge of Stevens Creek Boulevard over a distance of 600 feet from Monroe Street to the southbound on-ramp to I-880. The additional eastbound through lane will transition into the second lane of the existing single-lane southbound on-ramp to I-880. The southbound on-ramp will need to be widened from one lane to two. Striping and signage should be installed that warns drivers of the transition of the eastbound shoulder lane to the southbound on-ramp to I-880.

The implementation of these improvements would restore the intersection operation to LOS D for the daily peak and Saturday peak hour conditions and for all three site access alternatives. **(Less Than Significant Impact With Mitigation)**

Winchester Boulevard and Stevens Creek Boulevard

- **Improve the north leg of the intersection of Winchester Boulevard and Stevens Creek Boulevard to include the addition of a second southbound left-turn, and improve the south leg of this intersection to include the addition of a second northbound left-turn lane.**

These improvements cannot be accommodated within the existing curb-to-curb width. The implementation of these improvements would entail the removal and reconstruction of the curb, gutter, and sidewalk, and repaving and restriping in both directions of each of the south and north approaches, acquisition of seven-feet of right-of-way along the west edge of the north approach over a distance of 400 feet, and the loss of approximately 20 parking spaces along the west side of the south approach.

The implementation of these improvements would restore the intersection operation to LOS D. These improvements are physically possible, however, the Winchester/Stevens Creek northbound left turn lane addition is not located in the jurisdiction of the City of San Jose. Therefore, this mitigation cannot be imposed as a project condition. **(Significant Unavoidable Impact)**

Interstate 280 and 880

The project is estimated to have a significant impact on six freeway segments on I-280 and I-880. The improvements necessary to mitigate the project's impacts on these freeway segments would be the widening of these facilities. These freeway improvements are considered infeasible for implementation by a single project. **(Significant Unavoidable Impact)**

Significant Unavoidable Impacts

There is no feasible mitigation which could be reasonably imposed on the project to mitigate the project's impact on the six freeway segments, or at the Stevens Creek/Winchester intersection. These impacts, therefore, are considered to be significant and unavoidable.

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C. AIR QUALITY

The following discussion is based on an analysis of air quality impacts from the proposed project, prepared by *Donald Ballanti, Certified Consulting Meteorologist.* A copy of that report is included in Appendix B.

1. Existing Setting

Air Pollution Climatology

The amount of a given pollutant in the atmosphere is determined by the amount of pollutant released and the atmosphere's ability to transport and dilute the pollutant. The major determinants of transport and dilution are wind, atmospheric stability, terrain and, for photochemical pollutants, sunshine.

Northwest winds and northerly winds are most common in the project area, reflecting the orientation of the Bay and the San Francisco Peninsula. Winds from these directions carry pollutants released by autos and factories from upwind areas of the Peninsula toward San Jose, particularly during the summer months. Winds are lightest on the average in fall and winter. Every year in fall and winter there are periods of several days when winds are very light and local pollutants can build up.

Pollutants can be diluted by mixing in the atmosphere both vertically and horizontally. Vertical mixing and dilution of pollutants are often suppressed by inversion conditions, when a warm layer of air drops cooler air close to the surface. During the summer, inversions are generally elevated above ground level, but are present over 90 percent of the time in both the morning and afternoon. In winter, surface-based inversions dominate in the morning hours, but frequently dissipate by afternoon.

Topography can restrict horizontal dilution and mixing of pollutants by creating a barrier to air movement. The South Bay has significant terrain features that affect air quality. The Santa Cruz Mountains and Hayward Hills on either side of the South Bay restrict horizontal dilution, and this alignment of the terrain also channels winds from the north to south, carrying pollution from the northern Peninsula toward San Jose.

The combined effects of moderate ventilation, frequent inversions that restrict vertical dilution and terrain that restrict horizontal dilution give San Jose a relatively high atmospheric potential for pollution compared to other parts of the San Francisco Bay Air Basin.

Ambient Air Quality Standards

Both the U. S. Environmental Protection Agency and the California Air Resources Board have established ambient air quality standards for common pollutants. These ambient air quality standards are levels of contaminants which represent safe levels that avoid specific adverse health effects associated with each pollutant. The ambient air quality standards cover what are called "criteria" pollutants because the health and other effects of each pollutant are described in criteria documents. Table 20 identifies the major criteria pollutants, characteristics, health effects and typical sources.

The federal and California state ambient air quality standards are summarized in Table 21 for important pollutants. The federal and state ambient standards were developed independently with differing purposes and methods, although both processes attempted to avoid health-related effects. As a result, the federal and state standards differ in some cases. In general, the California state standards are more stringent. This is particularly true for ozone and PM-10.

The U.S. Environmental Protection Agency has recently announced new national air quality standards for ground-level ozone and for fine Particulate Matter. The existing 1-hour ozone standard of 0.12 PPM will be phased out and replaced by an 8-hour standard of 0.08 PPM. New national standards for fine Particulate Matter (diameter 2.5 microns or less) have also been established for 24-hour and annual averaging periods.

Table 20
Major Criteria Pollutants

Pollutant	Characteristics	Health Effects	Major Sources
Ozone	A highly reactive photochemical pollutant created by the action of sunshine on ozone precursors (primarily reactive hydrocarbons and oxides of nitrogen. Often called photochemical smog.	●Eye Irritation ●Respiratory function impairment.	The major sources ozone precursors are combustion sources such as factories and automobiles, and evaporation of solvents and fuels.
Carbon Monoxide	Carbon monoxide is an odorless, colorless gas that is highly toxic. It is formed by the incomplete combustion of fuels.	●Impairment of oxygen transport in the bloodstream. ●Aggravation of cardiovascular disease. ●Fatigue, headache, confusion, dizziness. ●Can be fatal in the case of very high concentrations.	Automobile exhaust, combustion of fuels, combustion of wood in woodstoves and fireplaces.
Nitrogen Dioxide	Reddish-brown gas that discolors the air, formed during combustion.	●Increased risk of acute and chronic respiratory disease.	Automobile and diesel truck exhaust, industrial processes, fossil-fueled power plants.
Sulfur Dioxide	Sulfur dioxide is a colorless gas with a pungent, irritating odor.	●Aggravation of chronic obstruction lung disease. ●Increased risk of acute and chronic respiratory disease.	Diesel vehicle exhaust, oil-powered power plants, industrial processes.
PM-10	Solid and liquid particles of dust, soot, aerosols and other matter which are small enough to remain suspended in the air for a long period of time.	●Aggravation of chronic disease and heart/lung disease symptoms.	Combustion, automobiles, field burning, factories and unpaved roads. Also a result of photochemical processes.

Table 21
Federal and State Ambient Air Quality Standards

Pollutant	**Averaging Time**	**Federal Primary Standard**	**State Standard**
Ozone	1-Hour	0.12 PPM	0.09 PPM
Carbon Monoxide	8-Hour 1-Hour	9.0 PPM 35.0 PPM	9.0 PPM 20.0 PPM
Nitrogen Dioxide	Annual Average 1-Hour	0.05 PPM --	-- 0.25 PPM
Sulfur Dioxide	Annual Average 24-Hour 1-Hour	0.03 PPM 0.14 PPM --	-- 0.05 PPM 0.25 PPM
PM_{10}	Annual Average 24-Hour	50 µg/m^3 150 µg/m^3	30 µg/m^3 50 µg/m^3
$PM_{2.5}$	Annual 24-Hour	15 µg/m^3 65 µg/m^3	-- --
Lead	30-Day Avg. Month Avg.	-- 1.5 µg/m^3	1.5 µg/m^3 --

PPM = Parts per Million
µg/m^3 = Micrograms per Cubic Meter

Ambient Air Quality

The Bay Area Air Quality Management District (BAAQMD) monitors air quality at several locations within the San Francisco Bay Air Basin. The monitoring site closest to the project site is in downtown San Jose. Table 22 summarizes exceedances of State and Federal standards at the downtown San Jose monitoring site during the period 1994-1996. Table 22 shows that ozone and PM-10 exceed the state standards in the project area. Violations of the carbon monoxide standards had been recorded at the downtown San Jose site prior to 1992.

Of the three pollutants known to at times exceed the state and federal standards in the project area, two are regional pollutants. Both ozone and PM-10 are considered regional pollutants in that concentrations are not determined by proximity to individual sources, but show a relative uniformity over a region. Thus, the data shown in Table 22 for ozone and PM-10 provide a good characterization of levels of these pollutants on the project site.

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Carbon monoxide is a local pollutant, i.e., high concentrations are normally only found very near sources. The major source of carbon monoxide, a colorless, odorless, poisonous gas, is automobile traffic. Elevated concentrations, therefore, are usually only found near areas of high traffic volumes.

The data shown in Table 22 for carbon monoxide are not necessarily representative of concentrations that would be found near the proposed project site. For this reason, concentrations of carbon monoxide have been estimated using a computer simulation model that predicts concentrations based on roadway locations, traffic volumes and traffic conditions.

Table 22
Summary of Air Quality Data for Downtown San Jose[2,3,4]

Pollutant	**Standard**	**Days Exceeding Standard in:**		
		1994	**1995**	**1996**
Ozone	Federal 1-Hour	0	1	0
Ozone	State 1-Hour	3	14	5
Carbon Monoxide	State/Federal 8-Hour	0	0	0
PM-10	Federal 24-Hour	0	0	0
PM-10	State 24-Hour	10	4	2

Attainment Status and Regional Air Quality Plans

The federal Clean Air Act and the California Clean Air Act of 1988 require that the State Air Resources Board, based on air quality monitoring data, designate portions of the State where the federal or state ambient air quality standards are not met as "nonattainment areas". Because of the differences between the national and state standards, the designation of nonattainment areas is different under the federal and state legislation.

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[2] Bay Area Air Quality Management District, *BAAQMD CEQA Guidelines*, 1996

[3] California Air Resources Board, California Air Quality Data, Annual Summaries, 1994-1995.

[4] Bay Area Air Quality Management District, Air Currents, April 1997.

Federal Air Quality Program

The Bay Area is currently a nonattainment area only for carbon monoxide. However, the U.S. Environmental Protection Agency has proposed reclassifying the Bay Area from "maintenance area" to nonattainment for ozone also, based on recent violations of the federal standards at several locations in the air basin. This would reverse the air basin's reclassification to "maintenance area" for ozone in 1995. Reclassification would require an update to the region's federal air quality plan.

The revisions to the national ambient standards for ozone and Particulate Matter have no immediate effect on nonattainment planning. Existing ozone and Particulate Matter designations will remain in effect until U.S. E.P.A establishes new designations based on any new ozone or Particulate Matter standard. Final promulgation of guidance for development of nonattainment plans for any new ozone or Particulate Matter standard is scheduled for June of 1999.

State Air Quality Program

Under the California Clean Air Act, Santa Clara County is a nonattainment area for ozone and PM-10. The County is either attainment or unclassified for other pollutants.

The California Clean Air Act requires local air pollution control districts to prepare air quality attainment plans. These plans must provide for district-wide emission reductions of five percent per year averaged over consecutive three-year periods or if not, provide for adoption of "all feasible measures on an expeditious schedule".

The current area-wide plan required by the California Clean Air Act was adopted in October 1994.[5] The Plan proposes the imposition of controls on stationary sources (factories, power plants, industrial sources, etc.) and Transportation Control Measures designed to reduce emissions from automobiles. Since the Plan does not provide for a 5% annual reduction in emissions, it proposes the adoption of "all feasible measures on an expeditious schedule".

Sensitive Receptors

The Bay Area Air Quality Management District defines sensitive receptors as facilities where sensitive receptor population groups (children, the elderly, the acutely ill and the chronically ill) are likely to located. These land uses include residences, schools playgrounds, child care centers, retirement homes, convalescent homes, hospitals and medical clinics. Existing residential areas northeast and east of the site along Redwood Avenue and Hemlock Avenue and new residential areas under construction east of the site represent the closest sensitive receptors to the project site. The proposed project itself would contain residential uses that would be new sensitive receptors.

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[5] Bay Area Air Quality Management District, Bay Area '94 Clean Air Plan (CAP), 1994.

2. Air Quality Impacts

Thresholds of Significance

For the purposes of this project, an air quality impact is considered significant if it will:

- Violate any ambient air quality standard, contribute substantially to an existing or projected air quality violation, or expose sensitive receptors to substantial pollutant concentrations; or
- Result in substantial emissions or deterioration of ambient air quality. The significance thresholds recommended by the Bay Area Air Quality Management District are considered to represent "substantial" emissions. The thresholds are 80 pounds per day for all regional air quality pollutants except carbon monoxide. The significance threshold for carbon monoxide is 550 pounds per day. However, exceedance of this threshold only triggers the need for estimates of carbon monoxide and significant impacts would be defined as an increase in an existing violation of greater than 0.1 parts per million, based on the accuracy of the monitoring instruments; or
- Create objectionable odors; or
- Alter air movement, moisture, or temperature, or result in any change in climate, either locally or regionally.

Local Impacts

On the local scale, the project would change traffic on the local street network and within the site's internal roads and parking areas. Carbon monoxide levels along roadways used by project traffic would also be changed. Carbon monoxide is an odorless, colorless poisonous gas whose primary source in the Bay Area is automobiles. Concentrations of this gas are generally highest near intersections of major roads because of the amount of idling, acceleration and deceleration occurring.

As described in Appendix B of this EIR, the CALINE-4 computer simulation model was applied to eight intersections near the project site. These intersections were selected on the basis of PM peak hour LOS. All would operate at LOS D or worse for one or more of the traffic scenarios. The model results were used to predict the maximum 1-and 8-hour concentrations, corresponding to the 1- and 8-hour averaging times specified in the state and federal ambient air quality standards for carbon monoxide.

Table 23 shows the results of the CALINE-4 analysis for the peak 1-hour and 8-hour traffic periods in parts per million (PPM). The 1-hour values are to be compared to the federal 1-hour standard of 35 PPM and the state standard of 20 PPM. The 8-hour values in Table 23 are to be compared to the state and federal standard of 9 PPM. Table 23 shows that existing 1-hour averaged concentrations exceed the 1-hour ambient standards at three of the eight intersections modeled. The 8-hour averaged concentrations at all eight intersections exceed the state/federal ambient air quality standards.

Future concentrations at study intersections would be influenced by two opposing trends: increasing traffic volumes and declining emission rates from vehicles. As shown on Table 23, concentrations would be lower than existing concentrations at all intersections even with the addition of background and project traffic. No exceedances of the 1-hour or 8-hour standards are predicted.

Table 23
Predicted Worst-Case Monoxide Concentrations at Selected Intersections, in Parts Per Million[6]

Intersection	Existing (1997)		Existing + Approved (2002)		Existing + Approved+ Project (2002)	
	1-Hour	8-Hour	1-Hour	8-Hour	1-Hour	8-Hour
Bascom/ San Carlos	16.7	9.6	12.6	7.1	12.7	7.2
Hamilton/ Winchester	21.2	12.8	15.2	9.0	15.2	9.0
Monroe/ Stevens Creek	18.1	10.6	14.1	8.2	14.8	8.7
Moorpark/ San Tomas	18.2	10.7	13.4	7.7	13.4	7.7
Moorpark/ Winchester	18.6	11.0	13.9	8.1	14.0	8.1
Winchester/ Stevens Creek	19.2	11.4	14.3	8.3	14.5	8.5
Stevens Creek/ Saratoga	17.3	10.0	12.9	7.4	13.0	7.4
San Tomas/ Stevens Creek	20.1	12.0	14.7	8.6	14.8	8.7

The addition of proposed project traffic would increase both 1-hour and 8-hour averaged concentrations. Project traffic would increase 1-hour and 8-hour concentrations by as much as 0.7 PPM. This increase would not create any new exceedances of the 1-hour or 8-hour standards, nor would the project "contribute substantially to an existing or projected violation" of the standards. Therefore, the project impacts on local carbon monoxide concentrations are considered to be less than significant.

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[6] Concentrations exceeding state or federal standards are underlined.

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- **The proposed project would not create any new exceedances of the 1-hour or 8-hour standards, nor would the project "contribute substantially to an existing or projected violation" of the standards. Thus, the project impacts on local carbon monoxide concentrations are considered to be less than significant. (Less than Significant Impact)**

Regional Impacts

Trips to and from the project would result in air pollutant emissions affecting the entire San Francisco Bay air basin. Regional emissions associated with project vehicle use have been calculated using the URBEMIS-5 computer program. The URBEMIS-5 program and the assumptions made in its use are described in Appendix B.

The estimated incremental daily emissions associated with new traffic generated by the proposed project are shown in Table 24 below for Reactive Organic Gases and Nitrogen Oxides (two precursors of ozone) and PM-10. Emissions associated with current use of the site has been similarly calculated.

Guidelines for the evaluation of project impacts issued by the Bay Area Air Quality Management District consider emission increases to be significant if they exceed 80 lbs per day for any regional pollutant.[7] Proposed new project emissions shown in Table 24 would exceed this criterion for NOx and PM-10, so the proposed project would have a significant effect on regional air quality.

- **Total project emissions of regional pollutants exceed BAAQMD thresholds and would have a significant impact on regional air quality. (Significant Impact)**

Table 24
Regional Emissions in Pounds Per Day

Source	Reactive Organic Gases	Nitrogen Oxides	PM-10
Project Emissions	189.6	237.8	273.0
Emissions from Uses Eliminated	- 76.1	- 105.5	- 128.2
Net Change	113.5	132.3	144.8
BAAQMD Significance Threshold	80.0	80.0	80.0

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[7] Bay Area Air Quality Management District, BAAQMD CEQA Guidelines, 1996.

Construction Impacts

Construction activities such as demolition, excavation and grading operations, construction vehicle traffic and wind blowing over exposed earth would generate exhaust emissions and fugitive particulate matter emissions that would affect local and regional air quality.

Demolition and site preparation activities would be the greatest source of air pollutant emissions during project construction. Removal of buildings and pavement materials and site grading would generate relatively large amounts of dust and PM-10 and lesser amounts of equipment exhaust gases such as reactive organic gases, oxides of nitrogen and carbon monoxide.

Construction dust could affect local air quality at various times during construction of the project. The dry, windy climate of the area during the summer months creates a high potential for dust generation when, and if, underlying soils are exposed to the atmosphere.

The local effects of construction activities would include increased dustfall and locally elevated levels of PM-10 downwind of construction activity. Depending on the weather, soil conditions, the amount of activity taking place and nature of dust control efforts these impacts could extend beyond the site boundaries. This impact is considered to be significant.

- **Air quality impacts resulting from construction, particularly generation of construction dust, could cause significant adverse effects to the adjacent land uses. (Significant Impact)**

3. Mitigation Measures for Air Quality Impacts

Mitigation Measures Proposed by the Project

Regional Impact Mitigation

- **Provision of secure and convenient residential and non-residential bicycle parking.**
- **Transit facilities such as bus turnouts, benches and shelters along public streets, and information kiosks on site.**

Conclusion: The above mitigation measures would be expected to reduce project trip generation by 1-5%. Since a reduction in trips of 42% would be necessary to reduce project regional impacts to a level that is not significant, the project impacts would remain significant. **(Significant Impact with Mitigation)**

Construction Impact Mitigation

- **Whenever possible, dust-proof chutes will be used for loading construction debris onto trucks.**

- **Watering will be used to control dust generation during demolition of structures and break-up of pavement.**

- **All trucks removing debris from the site will be covered.**

- **Internal haul roads will be paved, sealed or stabilized to control dust from truck traffic. Paved haul roads would be regularly swept or cleaned to remove accumulated dust.**

- **The recycling of demolition materials will be considered, as it would reduce the number of truck trips to the site during construction. It is possible that materials from the demolition of the shopping center buildings and pavement could be recycled after being crushed on site. The use of a crusher on the site would be subject to regulation by the Bay Area Air Quality Management District.**

The Bay Area Air Quality Management District considers the following feasible control measures appropriate for large construction sites:

- **Water all active construction areas at least twice daily, or as necessary to prevent dust emissions.**

- **Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites.**

- **Sweep daily (with water sweepers) all paved access roads, parking areas and staging areas at construction sites, or as necessary to keep of dirt and debris.**

- **Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets, or as necessary to keep of dirt and debris.**

- **Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas and previously graded areas inactive for ten days or more.**

- **Enclose, cover, water twice daily or apply (non-toxic) soil binders to exposed stockpiles (dirt, sand, etc.)**

- **Limit traffic speeds on unpaved roads to 15 mph.**

- **Install sandbags or other erosion control measures to prevent silt runoff to public roadways.**

- **Replant vegetation in disturbed areas as quickly as possible.**

Conclusion: Implementation of these construction mitigation measures will reduce the potential air quality impacts from construction activities to a less than significant level. **(Less than Significant Impact with Mitigation)**

Significant Unavoidable Impacts

Conclusion: There is no mitigation available that will completely avoid or reduce the significant regional air quality impacts, should the project be developed as proposed. The regional air quality impact would remain a significant unavoidable impact.

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D. NOISE

A noise analysis was prepared by *Illingworth & Rodkin, Inc.* in July, 1997, and is included in Appendix C of this EIR.

1. Existing Setting

Noise Guidelines

The Noise Element of the City of San Jose General Plan contains noise guidelines for various land uses within the City, and identifies acceptable noise exposure levels for those uses in terms of the Day-Night Level (L_{dn})[8] 24-hour descriptor. The General Plan guidelines identify 45 L_{dn} as an acceptable interior noise level for virtually all land uses, including residential, office, and commercial. An exterior noise level of 60 L_{dn} is considered acceptable for commercial uses if design measures to maintain a 45 L_{dn} interior noise level are provided. The General Plan also specifies that certain land uses cannot cause noise levels to exceed specified limits at their property line, particularly if the property line adjoins sensitive uses such as residential. The guideline for commercial uses is 55 L_{dn} at the property line. The project site is located adjacent to residential land uses to the east and northeasterly boundaries of the site.

Title 24 of the California Building Code contains uniform minimum noise insulation performance standards to protect individuals within multi-family dwelling units, hotels, motels, dormitories, and long-term care facilities. The Building Code requires that where exterior noise levels exceed 60 dB L_{dn}, the interior levels for multi-family dwelling units must not exceed 45 dB.

Existing Noise Conditions

The project site is bounded by Stevens Creek Boulevard to the north, and Winchester Boulevard to the west, office buildings are located to the south, a Pacific Bell facility is located to the southeast, and residential is located to the east and northeast. In 1992, a noise survey conducted on a larger site that included all the existing boundaries of the current project site, identified the noise from the traffic on Stevens Creek Boulevard, Winchester Boulevard, and the nearby freeways as the most significant noise sources. In addition, the mechanical equipment at the Pacific Bell facility was also identified as a potential noise source. A 1997 survey included noise measurements to confirm the noise levels identified in 1992, and provided analysis for the current project.

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[8] The Day-Night Level (DNL) used in Appendix C is equivalent to the term L_{dn}. The City of San Jose General Plan discusses noise impacts and guidelines in terms of L_{dn}.

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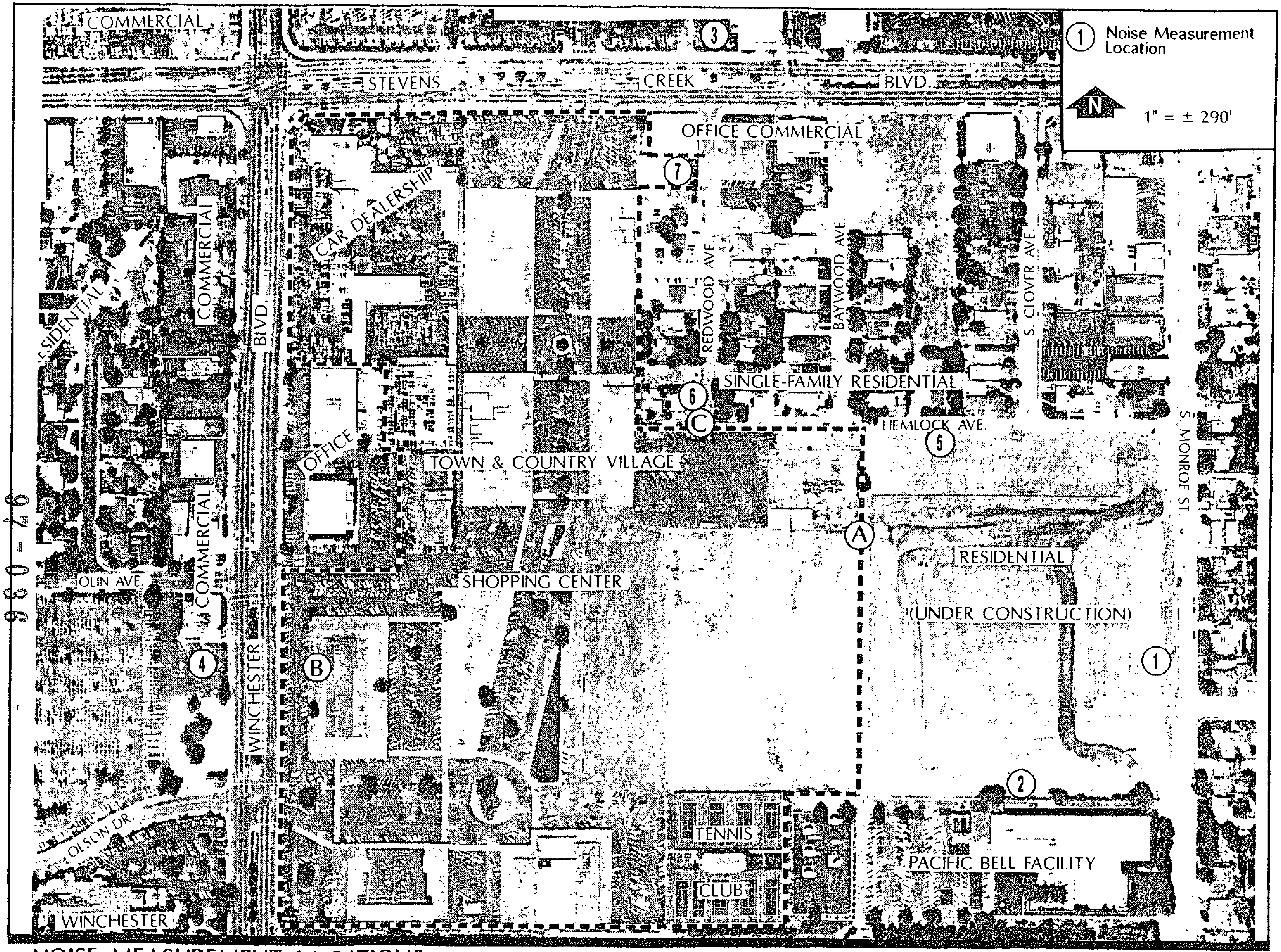

NOISE MEASUREMENT LOCATIONS

FIGURE 15

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1992 Survey

During the 1992 survey, one 24-hour and seven 15-minute measurements were taken on the project site. The measurement locations are shown on Figure 15. Most of the short-term measurement locations were visited twice. The measurements taken at Locations A, 3, 4, 6, and 7 are included within the current site boundary. The other measurement locations are no longer part of the project site. A summary of the noise levels measured at these locations is provided below.

Location A

A 24-hour monitor was placed along the eastern property boundary approximately 220 feet from Hemlock Avenue. The noise data collected at this location indicated an L_{dn} of 58 dB with the significant noise sources due to traffic on Stevens Creek Boulevard, Winchester Boulevard, and surrounding freeways.

Location 3

Measurements at this location were taken approximately 70 feet from the centerline of Stevens Creek Boulevard. The noise data collected at this location indicated an L_{dn} of 72 dB with the significant noise source being traffic on Stevens Creek Boulevard.

Location 4

Measurements at this location were taken approximately 80 feet from the centerline of Winchester Boulevard. The noise data collected at this location indicated an L_{dn} of 69 dB with the significant noise source being traffic on Winchester Boulevard.

Location 6

Measurements at this location were taken approximately 30 feet from the centerline of Hemlock Avenue. The noise data collected at this location indicated an L_{dn} between 55 and 58 dB with the significant noise source being traffic on Stevens Creek Boulevard.

Location 7

Measurements at this location were taken approximately 25 feet from the centerline of Redwood Avenue, approximately 125 feet south of Stevens Creek Boulevard. The noise data collected at this location indicated an L_{dn} between 63 and 65 dB with the significant noise source being traffic on Stevens Creek Boulevard.

1997 Survey

During the 1997 survey, two measurements were taken on the project site since the purpose of these measurements was.to confirm the previous data from the 1992 survey. The measurement locations are shown on Figure 15.

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Location B

Measurements at this location were taken approximately 90 feet from the centerline of Winchester Boulevard at the location of the potential residential development in Section 5 at the southwest corner of the site. The noise data collected from this location indicated an L_{dn} of 67 dB. This measurement confirms the previous data from the 1992 survey.

Location C

Measurements taken at this location were taken at the intersection of Redwood Avenue and Hemlock Avenue. The noise data collected from this location indicated an L_{dn} of 60 dB with the significant noise source being traffic on Redwood Avenue, Hemlock Avenue, and Stevens Creek Boulevard. This measurement confirms the previous data from the 1992 survey.

2. Noise Impacts

Thresholds of Significance

For the proposes of this project, a noise impact is considered significant if the project will:

- result in a substantial increase in the ambient noise levels; or
- generate construction noise levels exceeding 60 dBA during the daytime or 55 dBA during the nighttime (10 p.m.-7 a.m.) near a sensitive receptor; or
- expose people to noise levels in excess of established State or City standards.

Impacts to the Project

Stevens Creek Boulevard

The project proposes commercial development on Stevens Creek Boulevard along the northern boundary of the site. In addition, residential development may be proposed on some part of the Courtesy Chevrolet portion of the site in future. The exterior noise exposure along Stevens Creek Boulevard is an L_{dn} of 72 dB at 70 feet from the centerline. The noise exposure would be up to 12 dB in excess of the City of San Jose guideline for commercial and residential uses. No outdoor uses are planned along Stevens Creek Boulevard and, therefore, exterior noise exposure is not an issue. However, since the exterior noise levels exceed the 60 dB L_{dn} guidelines, special building practices may be required to reduce the interior noise levels to 45 dBL_{dn} or less. Interior noise levels would need to be reduced to 45 dB L_{dn} or less to meet the City of San Jose guidelines.

- **Exterior noise levels along Stevens Creek Boulevard would exceed the 60 dB L_{dn} guidelines. (Significant Impact)**

Winchester Boulevard

The proposed project includes multi-family residential development, commercial development, and a hotel on Winchester Boulevard along the western boundary of the site. The exterior noise exposure along Winchester Boulevard is an L_{dn} between 67 and 70 dB at the proposed setback. The noise exposure would be up to 10 dB in excess of the City of San Jose guidelines and the Title 24 criterion, and would exceed the City of San Jose Guidelines for balconies and patios. However, the City of San Jose recognizes that it may not be possible to achieve an exterior noise level of 60 dB L_{dn} for residential uses along major roadways. In addition, no outdoor uses are planned as part of the commercial development along Winchester Boulevard and, therefore, exterior noise exposure is not an issue for commercial uses. However, since the exterior noise levels exceed the 60 dB L_{dn} guidelines, special building practices may be required to reduce the interior noise levels to 45 dB L_{dn} or less. Interior noise levels for both the residential and commercial uses need to be reduced to 45 dB L_{dn} or less to meet the City of San Jose guideline and Title 24.

- **Exterior noise levels along Winchester Boulevard would exceed the 60 dB L_{dn} guidelines. (Significant Impact)**

Redwood Avenue/Hemlock Avenue

The proposed project includes multi-family residential development adjacent to the intersection of Redwood Avenue and Hemlock Avenue at the easterly site boundary. The exterior noise exposure at the intersection of Redwood Avenue and Hemlock Avenue is an L_{dn} of 60 dB. The noise exposure of 60 dB would be within the City of San Jose guideline and the Title 24 criterion for residential uses.

- **The exterior noise levels near Redwood Avenue and Hemlock Avenue would not exceed 60 dB, and the interior noise levels would not exceed the City of San Jose guidelines or Title 24 criterion for residential uses. (Less than Significant Impact)**

Pacific Bell Facility

The proposed project includes multi-family residential development at the southeasterly corner of the site near the Pacific Bell facility. The exterior noise exposure from the Pacific Bell facility is an L_{dn} of 60 dB at the proposed residential building setback. The exterior noise exposure of 60 dB would be within the City of San Jose guideline and the Title 24 criterion for residential uses.

- **Since the exterior noise levels at the building setback in the southeasterly corner of the site would not exceed 60 dB, the interior noise levels would not exceed the City of San Jose guidelines or Title 24 criterion for residential uses. (Less than Significant)**

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Impacts from the Project

As identified above, the primary noise source within the project vicinity is traffic on the surrounding roadway network. The addition of the project traffic along Hemlock Avenue would not increase the noise levels in the project area by 3 dB or more[9], thus, the project would not have a significant impact on the surrounding noise environment.

- **The addition of project traffic to the existing roadway network would not create a perceptible increase in noise levels on existing streets. (Less than Significant Impact)**

Construction Impacts

The project would demolish existing buildings on the site and construct new buildings and parking structures. Noise impacts resulting from the demolition and construction are primarily the result of noise generated by various pieces of construction equipment and may vary, depending on the timing and length of noise-generating activities, and the distance between construction activities and the nearby sensitive receptors. Construction activities are typically carried out in stages. During each stage of demolition and construction, there will be a different mix of equipment operating. Construction noise levels, therefore, vary by stage and vary within each stage depending upon the number and types of equipment operating.

Most demolition and construction noise is in the range of 80 to 90 dBA at a distance of 50 feet. The nearest existing residences and businesses to the project site are along Redwood Avenue, Hemlock Avenue, and Monroe Avenue at typical setbacks of 50 to 100 feet. When construction on the site occurs near theses residences and businesses, noise levels would be elevated and would interfere with speech communication and other everyday activities. Average noise levels at 100 feet from the center of the construction activity would typically range from 70 to 80 dBA during busy periods of construction. Piledriving may be required for the larger buildings proposed in the center of the site. Such noise levels occurring near the center of the site would result in noise levels of 85 to 90 dBA at the nearest residences within 300 to 600 feet. Construction noise elevates background noise levels for these residences and businesses adjacent to the site between 15 and 25 dBA. As the development of the site progresses and construction activities move away from nearby residences and businesses, the effects of the construction would lessen.

- **Construction of the project would create significant noise impacts on the adjacent residences and businesses. (Significant Impact)**

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[9] 3 dB is the minimum increase generally perceptible to the human ear.

3. Mitigation Measures for Noise Impacts

The project proposes the following mitigation measures to reduce or avoid noise impacts associated with its development.

Exterior Noise Mitigation

- **Common outdoor use areas for the multi-family residences will be provided at locations set back and/or shielded by buildings from traffic noise produced by Winchester Boulevard and from the mechanical equipment associated with the Pacific Bell facility.**

- **Outdoor balconies and patios on residential units facing Winchester Boulevard will be minimized.**

- **Most private outdoor areas will not be oriented toward public streets**

Interior Noise Mitigation

- **Prior to approval of the PD Permits for specific building designs, a detailed acoustical analysis will be prepared and the recommendations for noise attenuation will be incorporated into the design of the commercial and residential structures proposed on the project site to reduce the interior noise levels to 45 dBA. The design features which could provide noise attenuation include sound rated windows, forced air mechanical ventilation so windows could be kept closed, and special building construction techniques such as insulation and soundproofing.**

Given the density of the proposed residential development and the number of streets bordering the site, it is assumed that some of the private outdoor areas (patios and balconies) will be subject to noise levels in excess of the 60 L_{dn} identified as acceptable in the City's General Plan. These noises levels would not create risks to human health. For an urban development, slightly elevated noise levels would not be considered a significant impact.

Construction Noise Mitigation

- **The project proponent proposes to limit demolition and construction activities to daytime hours of 7:00 a.m. to 5:00 on weekdays, and non-holidays for on and off-site construction within 500 feet of residential development.**

- **All internal combustion engines for construction equipment used on the site shall be properly muffled and maintained.**

- **All stationary noise-generating construction equipment, such as air compressors and portable power generators, will be located as far as practical from existing residences and businesses.**

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- **Residential neighbors and the Director of Planning, Building and Code Enforcement will be notified of the construction schedule in writing at least seven days prior to the start of construction.**

- **A noise disturbance coordinator, responsible for responding to complaints about noise will be hired during the construction phase. The telephone number of the noise disturbance coordinator will posted on the project and be provided to adjacent residential neighbors and the Director of Planning, Building and Code Enforcement.**

Conclusion**:** The implementation of the identified mitigation measures would reduce the noise impacts to a less than significant level.

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E. SOILS AND GEOLOGY

1. Existing Setting

Geology

The project site is located in the Santa Clara Valley between the base of the western foothills of the Hamilton-Diablo Mountain Range and the northeasterly foothills of the Santa Cruz Mountains in the Coast Range Geomorphic Province of Central California. Bedrock in this area is generally of the Franciscan Complex consisting of igneous, sedimentary and metamorphic rocks of the Upper Jurassic to Cretaceous age (70 to 140 million years old). These formations are part of the northwesterly material found along the east side of the San Andreas Fault.

The Franciscan rocks are overlain by marine and non-marine sediments of Cretaceous to Plio-Pleistocene age which are 80 to two million years old. Overlain by the Cretaceous to Plio-Pleistocene age are alluvial, fluvial, lacustrine and bay deposits of Pleistocene to Holocene age generally consists of fluvial deposits of Holocene age which are generally less than two million years old. The stratigraphy in the vicinity of the project area generally consists of fluvial deposits of Holocene age that are approximately 11,000 years old or less. These deposits consist of alternating layers of silts, sands, clays, and sandy gravels, which were likely deposited in the old flood plains heading towards southern San Francisco Bay. The topography slopes gently toward the northeast.

Soils

The project site is underlain by soils of the Zamora Pleasanton and Yolo-Esparto associations as classified by the United States Department of Agriculture, Soil Conservation Service. Zamora clay loam (ZbA), Pleasanton gravelly (PpA), and Yolo loam (YeA) are located on the project site.

Zamora clay loam is characterized by a dark grayish, massive, hard neutral surface layer 12-20 inches thick; good drainage; moderately slow subsoil permeability; very slow surface runoff; no erosion hazard; high inherent fertility (Class I); and a moderate shrink swell capacity.

Pleasanton gravelly is characterized by a brown, massive, hard slightly acidic surface layer 16 to 20 inches thick; good drainage; moderately slow subsoil permeability; very slow surface runoff; no erosion hazard; moderate inherent fertility (Class II); and a moderate shrink swell capacity.

Yolo loam is characterized by a grayish brown, massive, hard mildly slightly alkaline surface layer approximately 26 to 32 inches thick; good drainage; moderately slow subsoil permeability; very slow surface runoff, no erosion hazard; high inherent fertility (Class I, III), and a moderate shrink swell capacity.

According to Cooper-Clark and Associates' *San Jose Geotechnical Investigation,* the site is mapped as having a least landslide susceptibility, weak soil layers and lenses occurring at random locations and depths, moderately expansive soils, and no erosion potential.

Seismic Conditions

The project site is located in a seismically active part of northern California. Earthquakes are generated on strike-slip faults of the San Andreas fault system as the Pacific and North American Plates slide past each other. Earthquakes may also occur on low angle thrust faults in the Coast Range. The Alquist-Priolo Special Studies Zones Act (1973) requires that faults which have been active since the Holocene times (within approximately 11,000 years) be mapped to prevent structures occupied by humans from being located on them. No known active or potentially active faults traverse the project site. Therefore, there is no potential for fault rupture. However, the San Andreas Fault is located approximately 8.7 miles to the west of the project site, and the Hayward Fault traverses approximately 8.7 miles to the east. Major earthquakes are likely to occur on either fault during the life of the project.

The site is located in an area of alluvium underlain by bedrock at depths of 1,000 feet or more. In the event of a major earthquake, maximum ground surface acceleration will be between 0.30 and 0.35 g with a fundamental period of ground shaking between 4.5 and 5.5 seconds.[10]

According to Cooper-Clark Associates' *San Jose Geotechnical Investigation,* the site is mapped as having a moderately high liquefaction potential.

2. Soils and Geology Impacts

Thresholds of Significance

For the purposes of this project, a geologic impact is considered significant if the project will:

- be located on a site with geologic features which pose a substantial hazard to property and/or human life (*i.e.*,. an active fault, active landslide); or
- expose people or property to major geologic hazards that cannot be mitigated through the use of standard engineering design and seismic safety design techniques.

Soils and Geologic Hazards

The future redevelopment of the site would not result in significant soils and geologic impacts. A design-level geotechnical investigation will be prepared and will include specific foundation design standards for the buildings that will make up the proposed project. There are no conditions on the site that cannot be accommodated by standard engineering design.

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[10] Cooper Clark, Geotechnical Investigation for the City of San Jose Sphere of Influence, 1974.

Seismic Hazards

The site is within the seismically active San Francisco Bay Area and severe ground shaking is probable during the anticipated life of future mixed use development on the project site. Additionally, the site includes areas classified as having a moderately high potential for seismically-induced liquefaction. However, these conditions are not unique to the site. Severe groundshaking is expected throughout the entire Bay Area, and the presence of some soils with liquefaction potential is not unique, nor a substantial site constraint. Compliance with the provisions of the Uniform Building Code and the recommendations for an design level geotechnical report will account for these conditions as a matter of standard practice.

- **A design level geotechnical investigation for the project site will be completed to address potential geologic hazards on the site, including liquefaction-induced settlement and lateral spreading. The geotechnical investigation for individual buildings will be completed to the satisfaction of the Director of Public Works prior to the issuance of a Public Works Clearance for that phase of the project. The investigation will include recommendations for proper foundation design, site preparation, and grading, which will be incorporated into the project design at the permit stage.**

- **Seismic hazards to the proposed project will be addressed by utilizing construction practices in accordance with Seismic Zone 4 building criteria, as described in the San Jose Building Code.**

Conclusion: Development of the project as proposed would not expose structures and occupants to significant seismic impacts that cannot be mitigated through standard engineering design. The implementation of the standard design techniques described above and included in the proposed project will ensure that no significant geologic impacts occur. **(Less than Significant Impact with Mitigation)**

F. HYDROLOGY

1. Existing Setting

Hydrology and Flooding

There are no natural waterways located on or within one half mile of the project site. The nearest creek, Los Gatos Creek, is located over two miles to the east of the project site. Regionally, Los Gatos Creek is one of five major streams that descend from the Santa Cruz Mountains.

The project site is located in Zone "D" of the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map for the City of San Jose, which indicates that the site is not located within a 100-year floodplain. The site is located in an area of undetermined, but possible flood hazards.

Storm Drainage Facilities

Approximately 34 acres of the project site are covered with impervious surfaces, while 5 acres of the site are vacant and pervious. Storm drainage lines are located near the intersection of Stevens Creek Boulevard and Monroe Street. One catch basin, located at the southwest corner of the 5 acre vacant lot, carries water from the southern end of Monroe Street north. Another catch basin exists behind the materials storage yard at the northeastern corner of the lot. In addition, a storm drain catch basin is located in the Town & Country Village parking lot with a 21 inch main.

2. Hydrology Impacts

Thresholds of Significance

- substantially degrade or deplete groundwater resources; or
- increase the potential for flood related property loss or hazard to human life; or
- significantly increase peak stormwater runoff; or
- significantly increase stormwater pollution discharges to stormwater systems; or
- substantially degrade water quality.

Hydrology and Flooding

The project site is located in Zone "D" of the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map for the City of San Jose, which indicates that the site is not located within a 100-year floodplain. The site is located in an area of undetermined, but possible flood hazards.

- **The site is not located within the 100 year floodplain; therefore, the potential for significant flooding on this site is unlikely. (Less than Significant Impact)**

Storm Drainage

The majority of the project site is already covered with impervious surface. The addition of impervious surfaces to the remaining 5 acres of vacant land would not substantially increase the volume of storm water draining from the site. The existing storm water system is adequate to serve the proposed project.

- **Development of the project site will minimally increase the amount of storm water runoff from the site. There is adequate storm water capacity in the existing system to accommodate the increased volume of storm water. (Less than Significant Impact)**

Water Quality

Long term effects on the water quality of the surface runoff from the project would occur during and after project construction as a result of the installation of additional paved driveways and parking on five acres of land that is now vacant. Runoff from graded surfaces and soil accumulations in streets and driveways would increase sedimentation in storm water. Petroleum derivatives from parked cars and asphalt could contaminate surface runoff. Landscape maintenance activities could also result in potential surface water contamination if pesticides, herbicides or chemical fertilizers are used on the site and are allowed to come in contact with runoff.

- **Development of the site could significantly increase the amount of contamination of storm water runoff. (Significant Impact)**

3. Mitigation Measures for Hydrologic Impacts

The following measures would provide mitigation for potentially significant water quality impacts:

- **The project would be required to comply with the NPDES General Construction Activity Storm Water Permit administered by the Regional Water Quality Control Board. Prior to construction grading the applicant will file a "Notice of Intent" (NOI) to comply with the General Permit and prepare a Storm Water Pollutant Prevention Plan (SWPPP) which addresses measures that would be included in the project to minimize and control construction and post-construction runoff. The SWPPP will be reviewed and approved by the City of San Jose Department of Environmental Services.**

- **The project will include post-construction structural controls including Best Management Practice (BMP) for reducing contamination in stormwater runoff such as swales, drop inlets, etc. (i.e. permanent features of the project).**

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- **Construction practices will include use of erosion control devices, including hay bales and/or Petromat, and on-site retention to minimize contamination of stormwater runoff.**

- **Whenever possible, dust-proof chutes will be used for loading construction debris onto trucks.**

- **All trucks removing debris from the site will be covered.**

- **Internal haul roads will be paved, sealed or stabilized to control dust from truck traffic. Paved haul roads would be regularly swept or cleaned to remove accumulated dust.**

- **The recycling of demolition materials will be considered, as it would reduce the number of truck trips to the site during construction. It is possible that materials from the demolition of the shopping center buildings and pavement could be recycled after being crushed on site. The use of a crusher on the site would be subject to regulation by the Bay Area Air Quality Management District.**

- **As part of the mitigation for post-construction runoff impacts addressed in the SWPPP, the project will implement regular maintenance activities including sweeping, cleaning stormwater inlets, and litter control at the site to prevent soil, grease, and litter from accumulation on the project site and contamination of surface runoff. Stormwater catch basins will be stenciled to discourage illegal dumping.**

Conclusion: With the implementation of the mitigation measures listed above, the water quality impacts will be reduced to a less than significant impact. **(Less Than Significant with Mitigation)**

G. BIOLOGICAL RESOURCES

A vegetation and wildlife survey was conducted on the site in January, 1993, and a tree survey was prepared in August, 1992. The tree survey was updated in July, 1997. The results of these surveys are summarized below. A burrowing owl survey was conducted on the site by *H.T. Harvey and Associates* in October, 1997. A copy of this survey is contained in Appendix D.

1. Existing Setting

Vegetation

Vegetation and wildlife habitat within the existing Town and Country Village consists of mostly developed areas that include urban landscaping, paved surfaces, and buildings. An approximately five-acre vacant field is located adjacent to the eastern property boundary. There are no natural communities within the project area.

Landscaped areas support trees, shrubs, and bedding plants in planting strips adjacent to buildings and parking areas. There are a total of 40 trees on the site. The trees include coast live oak (*Quercus agrigolia),* Canary Island pine (*Pinus canarienis*), palms (*Phoenix* sp. *And Washington* sp.*)*, and Lombardy poplar (*Populus nigra).* Some of the large coast oaks on the site are located adjacent to and within existing buildings where roofs have been constructed around them. A summary table of the results of the tree survey follows. The table lists the trees by common name, the number surveyed, and the ranges of their diameter and general.

Table 25
Summary of Trees Located on the Site

Species of Trees	Number Surveyed	Dia. (in.) Range	General Condition
Coast Live Oak*	25	15" to 35"	Fair to Good
Blue Spruce	1	14"	Fair
Juniper	2	9" to 14"	Good
Canary Island Pine*	2	16" to 30"	Fair to Good
Silk Oak*	1	21"	Fair
Privet	1	8", 8", 8", 9"	Poor
Poplar*	2	21" to 40"	Fair
Washington Fan Palm*	1	23"	Good
Date Palm*	4	25" to 31"	Good
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*Includes Ordinance size trees (more than 18 inches in diameter).

The five-acre vacant field supports low growing, ruderal (weedy) vegetation such as bull mallow (*Malva nicaeensis),* wild oat *(Avena sp.),* ripgut grass (*Bromus rigidus)*, filaree (*Erodium* sp.), Russian thistle (*Salsola Kali* var. *Tenuifolia*) and sow thistle (*Sonchus* sp.). Vegetation is removed on a regular basis by discing and mowing.

Wildlife

The project site provides habitat for wildlife species commonly associated with urban areas. Landscape trees within the project area provide cover and perch sites for birds such as mourning dove (*Zenaida macroura*), house sparrow (*Passer domesticus*), Anna's hummingbird (*Calypte anna*), Northern mockingbird (*Mimus polyglottos*), American crow (*Corvus brachrhynchos*) and Brewer's blackbird (*Euphagus cyanocephalus*). Burrowing animals such as California ground squirrel (*Spermophilus beecheyi*) and Botta's pocket gopher (*Thomomys bottae*) use the open field area but are limited in areas covered with pavement and buildings. Most of the site has low habitat value for mammals, lizards, and snakes. Other wildlife that may be found in the vicinity of the project site include fox squirrel (*Sciurus niger*), raccoon (*Procyon lotor*), and opossum (*Didelphis virginiana).*

Special Status Animal Species of the Site

Several special-status animals have been identified as historically or currently occurring in the vicinity of the project site. The majority of special-status animal species occurring in the South Bay area breed and forage in habitat types that are not present within or adjacent to the project site.

Burrowing owls (*Speotyto cunicularia*) The Burrowing Owl is a California Species of Special Concern. Nesting owls are protected under the Migratory Bird Treaty Act and the State of California Fish and Game Code. The Burrowing Owl is a small, terrestrial owl that occurs in annual and perennial grasslands, deserts, and scrublands with low-growing vegetation. Suitable owl habitat may also include trees and shrubs if the canopy does not cover more than 30% of the ground surface. Burrows, which provide protection, shelter, and nests for Burrowing Owls, represent an essential component of this species's habitat. Burrowing Owls typically use burrows made by burrowing mammals, such as ground squirrels or badgers, but they will also use man-made structures such as culverts, or openings beneath cement, asphalt paving, or debris piles. Burrowing Owls use such sites for breeding, wintering, foraging, and migration stopovers.

The vacant parcel located along the eastern property boundary was surveyed for the presence of Burrowing Owls. Four separate surveys were conducted on the site by walking successive transects at roughly 10 meter intervals. No Burrowing Owls were found during the surveys. However, since the original surveys, up to three Burrowing Owls have been observed foraging on the project site. Two of the birds habitually roost on the roof of the existing shopping center.

Trees

A tree survey was conducted on the site in August, 1992, and updated in July, 1997. A total of 40 trees having a trunk diameter of 9 inches or greater, or having multiple trunks were evaluated. Thirty-two trees equal or exceed 18 inches in diameter and would be protected under the City's Tree Ordinance[11].

2. Biological Impacts

Thresholds of Significance

For the proposes of this project, a biological resources impact is considered significant if the project will:

- directly affect species under provisions of the Migratory Bird Treaty Act (*e.g.*, burrowing owls); or
- result in the removal of ordinance sized trees.

Other than possible impacts to Burrowing Owls, development of the project will not result in the loss of wildlife habitat, since the site will continue to be landscaped urban environment.

Burrowing Owls

The development of the project site will have no effect on the breeding success of the Burrowing Owl, although it may result in a small reduction in habitat available to them. The vacant portion of the site is approximately 4.5 -5 acres of weedy ground, closely bordered by paved surfaces and buildings. The vacant area does not meet the definition of what is considered by the State Department of Fish and Game to be a minimum amount of habitat to support one or a pair of Burrowing Owls (6.5 acres). In addition, its location in close proximity to urban development, including a new residential project, means the site is subject to heavy predation from cats and other sources. While there are currently owls on the property, two of them appear to spend most of their time in the shopping center, which is not considered habitat. The development of the vacant ground would not constitute a significant loss of burrowing owl habitat.

- **Development of the project site would not result in a significant loss of wildlife habitat. (Less than Significant Impact)**

Future construction which destroyed birds and/or nests containing eggs or birds, would negatively impact individual members of the species.

- **The project could impact Burrowing Owls. Should the owls be present on the site prior to the start of grading, individual birds and /or their eggs could be destroyed. (Significant Impact)**

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[11] City of San Jose Civil Code (13.32.020)

Impacts to Ordinance Trees

Construction activities would require the removal of all 40 trees on the project site. Thirty-two (32) of the trees equal or exceed 18 inches in diameter and come under the review of the City's Tree Ordinance, which requires a permit for the removal of any tree with an 18-inch diameter or greater.

- **Development of the site would result in the removal of 32 ordinance sized trees. (Significant Impact)**

3. Mitigation Measures

The following measures are proposed as part of the project to avoid or minimize impacts biological resources:

Burrowing Owls

- **In conformance with federal and state regulations regarding the protection of raptors, a preconstruction survey for Burrowing Owls will be completed in conformance with appropriate protocols, no more than 30 days prior to the start of construction for any phase of construction on the vacant portion of the site. If no Burrowing Owls are located during these surveys, then no additional action would be warranted. However, if breeding or resident owls are located on or immediately adjacent tot he site, a construction-free buffer zone around the active burrow would be established as determined by the ornithologist, in consultation with CDFG. No construction activities would proceed that would disturb breeding owls.**
  - **If resident or breeding owls are located on the site during pre-construction surveys, a site-specific mitigation plan would be prepared. This plan could include: performing any construction in the vicinity of the nests outside the breeding season; or alternatively, establishing a construction-free buffer zone around the next. Construction would only proceed after owl chicks have fledged and are independent of any immediate nesting area. No construction activities would proceed that would disturb breeding owls.**
  - **If it is necessary to relocate one or more owls off the site outside of the breeding season, either passive or active relocation would be performed in conformance with a site-specific memorandum of understanding approved by CDFG.**
  - **Any relocation site(s) would be monitored at least three times during the breeding season for a period of three years following relocation. Monitoring results would be provided to the CDFG and USFWS as part of permit requirements.**

Ordinance Trees

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- **A permit will be obtained for the removal of any tree with a diameter of 18 inches or greater.**

- **Any trees that are removed will be replaced by new trees at the following ratios:**

≥ 18-inch diameter	**4**	**24-inch box**
12 to 17-inches diameter	**2**	**24-inch box**
< 12-inches diameter	**1**	**15 gallon**

Conclusion: With the implementation of the above mitigation measures, the potentially significant biological impacts will be avoided and/or reduced to a less than significant level. **(Less than Significant Impact with Mitigation)**

H. HAZARDOUS MATERIALS

This section is based on an Environmental Site Assessment and a Site Characterization Report prepared by *Emcon* in January, 1997 and March, 1997, respectively, which are included in Appendix E of this EIR. The reports included a review of previous work conducted on the site, a review of aerial photographs, summary of personal interviews, and the analysis of soil and groundwater samples.

1. Existing Setting

Potential On-Site Sources of Contamination

Former Dry Cleaner

A dry cleaning operation was located in Building 9, Unit 906 of the Town and Country Village shopping center. Building 9 is located in the southeasterly corner of the site, adjacent to the existing tennis courts. Previous environmental work conducted on the project site included vapor and soil sampling from two boring holes. Tetrachloroethene (PCE) was detected in the vapor and soil samples. The concentrations of PCE ranged from 0.018 to 0.031 parts per million (ppm).

The dry cleaner was no longer in operation during the site reconnaissance in January, 1997. The building unit is currently used for storage. Staining was observed on the floor in the southeastern corner of the unit where the former dry cleaning machine was located. Miscellaneous pipes were observed throughout the ceiling of the unit, much of which was wrapped with potentially asbestos-containing insulation. A closet in the back of the unit contained some partially full cans of paint, motor oil, gear oil, and paint thinner. Four additional soil samples were collected during the site reconnaissance. Low concentrations of PCE were detected in all four soil samples. The concentrations ranged from 0.07 to 0.31 mg/kg, and were consistent with the concentrations detected in the soil samples previously collected.

At the request of the Department of Toxic Substances Control (DTSC), additional soil samples were collected in February, 1997. The results of these samples detected a maximum soil concentration of 1.2 mg/kg of PCE at 3.5 feet below the ground surface (bgs).

In addition, an analysis was conducted in October 1997 to determine whether the plume of PCE would reach the groundwater table (approximately 50 feet below the surface). The modeling analysis showed that the PCE would not reach the water table after 99 years.

Courtesy Chevrolet

In March 1994, four underground storage tanks (UST) and the associated impacted soil were removed from the northwestern corner of the project site. A subsequent subsurface investigation of the area within and adjacent to the previous location of the USTs determined the levels of TPHG, benzene, toluene, ethylbenzene, and xylene (BTEX) were below detection limits. In November, 1996, the Santa Clara Valley Water District determined no further action would be required.

During the site reconnaissance in January, 1997, the following environmental concerns were identified.

Service Bay Drain Line

Approximately 950 feet of open grated drainline is located in front of the service bays. The drain line may pass through an oil separator prior to connection with the storm drain. This drain collects storm water run-off from the surrounding parking areas and the service bays.

Oil Water Separator

An oil/water separator is located in front of the car wash. This separator collects water from the car wash and possibly water from the drain line prior to connection with the storm drain. The separator is located underground and constructed of concrete.

Hydraulic Lifts

Approximately ten hydraulic lifts are present within the service bays. Some of the bays are no longer in service but the associated components exist.

Waste Coolant and Waste Oil Tanks

Two above ground storage tanks (ASTs), one for waste coolant and one for waste oil, were observed in the service bays on concrete floors. Staining was present around the ASTs which indicates that some spillage has occurred.

Oil Tanks Enclosure

An enclosure on the southern side of the Courtesy Chevrolet office building contains three oil ASTs and an air compressor. The concrete floor near the ASTs was covered by approximately one inch of oily water. Staining was also noted under the air compressor.

Service Bay

One of the service bays on the western side of the facility has a concrete floor that is approximately four feet lower than the surrounding bays. The concrete floor in the depressed area was stained black from oil.

Detailed testing of this area will be required prior to any change in land use on this portion of the project site.

Former Agricultural Uses

Previous environmental review on the project site identified concentrations of organochlorine pesticides (DDT, DDE, and DDD), organophosphate pesticides, carbamate and urea pesticides due to former agricultural uses on the site.

Ten soil samples were taken on the site. Pesticides were detected in six of the ten samples. DDT, DDE, and DDD concentrations ranged from 0.03 mg/kg to a high of 7.6 mg/kg. These concentrations of pesticides are consistent with concentrations detected during previous investigations. Four borings contained total pesticide concentrations exceeding 1 mg/kg. Three of the four borings were located on the vacant portion of the site along the easterly property boundary.

Arsenic and lead were detected in six of the ten samples. The arsenic concentrations ranged from 25 to 860 mg/kg and the lead concentrations ranged form 6 to 1,500 mg/kg. The highest concentrations for arsenic (860 mg/kg) and lead (1,500 mg/kg) were detected in a single sample at a depth of three feet below the ground surface (bgs). This sample exceeds the total threshold limit concentrations (TTLC) for arsenic (500 mg/kg) and lead (1,000 mg/kg) which means that this soil would be classified as a hazardous material if it were removed from the site.

Storage Area

At the time of the site reconnaissance, the asphalt storage area located near the easterly site boundary contained two small sheds and one larger storage building. The smaller sheds were filled with paint cans of various sizes. The larger storage building contained lumber, vacuums, and rolls of asphalt roofing paper. The eastern side of the storage building contained three empty compressed gas cylinders, seven 55-gallon drums, four of which were open and were full of unknown liquids. In addition, three 55-gallon drums full of soil from the previous soil investigation were noted within this area. No staining was observed.

Since the time of the site reconnaissance, the seven 55-gallon drums were removed from the site in accordance with local, state, and federal regulations.

Off-Site Sources of Contamination

Groundwater

Three monitoring wells were drilled on the project site in December, 1996 ranging in depth from 71.5 to 75 feet bgs. The groundwater level ranges in depth from 49 to 53 feet bgs. Groundwater samples detected low concentrations of TPHD (diesel fuel) and of heavy oil. No TPHG, BTEX, MTBE, pesticides, and VOCs were detected within the samples. These low concentrations of TPHD were identified in areas that are down- and cross-gradient from the areas proposed for residential development on the project site.

2. Hazardous Material Impacts

Thresholds of Significance

For the purposes of this project, a hazardous impact is considered significant if the approval of the project will:

- expose people to a significant risk associated with the storage, use, production or disposal of hazardous materials on the site or from existing hazardous materials contamination on the site; or
- pose a hazard to people or animal or plant populations; or
- create a public health hazard.

Potential Sources of On-Site Impacts

Courtesy Chevrolet

A number of potential environmental hazards have been identified on the Courtesy Chevrolet portion of the project site. Since the auto dealership may remain in operation, no testing has been conducted on this portion of the site.

- **The extent of the environmental hazards identified on the Courtesy Chevrolet portion of the project site has not been determined and may create a health hazard, particularly if residential uses are developed on this portion of the site. (Significant Impact)**

Human Health Screening Evaluation

A Human Health Screening Evaluation (HHSE) was conducted as part of the environmental site assessment and was updated during the site characterization. The HHSE focuses on estimating the potential threat to public health posed by recognized environmental conditions at the project site. The purpose of the HHSE is to assist in assessing the need for and extent of site remediation to protect human health. The HHSE consisted of an evaluation of arsenic, lead, PCE, and organochlorine pesticides, to determine if the measured concentrations of these compounds are within the range of acceptable criteria as defined by the regulatory community. The results of the HHSE indicate that the levels for noncarcinogenic risks were below the established regulatory limits. The potential exposure to pesticides and arsenic in some areas of the site exceeds the target cancer risk for these compounds. The potential exposure to PCE, lead, and petroleum hydrocarbons, do not exceed the cancer risk level.

- **Development of the project site as proposed may result in the exposure of future project residents to significant risks to human health and safety. (Significant Impact)**

3. Mitigation for Hazardous Materials Impacts

The project proposes the following mitigation measures to reduce the hazardous materials impacts associated with its development.

- **A detailed environmental site assessment will be conducted on the Courtesy Chevrolet portion of the site prior to the issuance of a PD Permit for this portion of the site. The proposed project will identify and implement remediation measures as necessary to reduce any potential health risks in conformance with local, state, and federal regulations.**

- **Prior to issuance of a PD Permit for development of either (1) the Courtesy Chevrolet portion of the property, (2) the Building 9 area of the vacant former dry cleaner operation, or 3) the former agricultural area, a Removal Action Workplan (RAW) will be developed in conjunction with the Department of Toxic Substances Control and the City of San Jose requirements. The RAW will describe the specific measures that will be implemented to reduce or/avoid the potential exposure of future residents, workers, and users of the site to hazardous materials, if it is determined that such measures are necessary. The Workplan is expected to include proposed remedial measures such as capping the contaminated soil with buildings or pavement and/or removing all or a portion of the contaminated soil for off-site treatment or disposal at an appropriate disposal site. Once implemented, the RAW will reduce the levels of contamination within the areas designated for residential uses to acceptable threshold levels as established by local, state, and federal regulatory agencies.**

Conclusion: With the implementation of the above mitigation measures, the potentially significant hazardous materials impacts will be reduced to a less than significant level and will not result in exposure of future project residents or construction workers to significant risks to human health and safety. **(Less than Significant Impact with Mitigation)**

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I. VISUAL AND AESTHETIC QUALITY

1. Existing Setting

Visual and Aesthetic Character of the Project Site

The project site is located in an urban center dominated by commercial and retail land uses. The majority of the 39-acre project site is currently developed. The existing Town and Country Village shopping center contains approximately 140 business suites in ten, one- to two-story buildings totaling 285,000 square feet, and covers the majority of the site. These buildings are occupied by various types of retail uses, specialty stores, boutiques, restaurants, and small offices. Courtesy Chevrolet car dealership which contains 40,000 square feet of buildings and a car display lot, is located on the northwesterly corner of the site. The Town and Country Tennis Club, which includes eight tennis courts and a two story clubhouse, is located on the southeasterly corner of the site. Approximately five acres of the site along the easterly boundary is vacant grassland.

Visual and Aesthetic Character of the Surrounding Area

The project site is located in an urban center of mixed commercial and residential development, including very large buildings and extensive parking lots. Valley Fair Shopping Center is located to the north of the project site. The Winchester Mystery House, a movie theater complex, and various commercial uses are located along the westerly site boundary across Winchester Boulevard. The Town and Country Village and Courtesy Chevrolet facilities surround an existing two-story commercial building and a three story office building along the easterly site boundary adjacent to Winchester Boulevard. Two six- and ten-story office buildings are located on Tisch Way, adjacent to the southwesterly site boundary. The Pacific Bell Telephone office building which is approximately 30 feet tall, is located adjacent to the southeasterly site boundary. New two-story single family residences are currently under construction along the easterly site boundary. A mixture of small-scale commercial and retail uses located in former residential structures, single family residences and duplexes are located along Hemlock Avenue and Redwood Avenue, adjacent to the northeasterly site boundary. In addition, a two story office building is on Stevens Creek Boulevard adjacent to the northeasterly corner of the site.

2. Visual Impacts

Thresholds of Significance

For the purposes of this project, an aesthetic or visual impact is considered significant if the project will:

- substantially block existing views of scenic vistas or resources; or
- produce substantial light or glare, such that it poses a hazard or nuisance; or
- introduce new development which will substantially detract form the integrity, character and/or aesthetic environment of this neighborhood.

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Impacts from the Project Development

Aesthetic values are largely subjective. Individual taste may vary significantly, particularly with regard to architectural style. The redevelopment of the site would change the visual appearance of the site from an older one- to two-story shopping center to a more intense, urban mixed use development with buildings up to seven-stories in height. The site is located within a highly urbanized area. As shown in the aerial photograph of the area (Figure 10) and the Plan Sections and Typical Elevations (Figures 5, 6 and 7) of the proposed project, the increased land use intensity on the site would remain similar to that of the surrounding land uses.

- **Visual and aesthetic changes resulting from development of the project as proposed will not constitute a significant environmental impact. (Less Than Significant Impact)**

J. CULTURAL RESOURCES

Holman & Associates conducted an archaeological investigation of the project site, in May, 1988 and February, 1992. These investigations included a literature search and a site reconnaissance. Because the reports themselves discuss the location of specific archaeological sites, they are considered administratively confidential and are not included in this EIR. The reports are on file with the City of San Jose, at the office of the Planning Division, and are available for review during normal office hours.

1. Existing Setting

Literature Review

Prior to field inspections of the project site, Holman & Associates reviewed the records on file at the Northwest Information Center at Sonoma State University to identify any recorded prehistoric or historic sites on the project site or within the immediate vicinity. No recorded prehistoric or historic sites were identified on the site. The Winchester Mystery House was identified as an off-site historic resource. The Winchester Mystery House is located southwest of the project site across Winchester Boulevard. No other recorded historic or prehistoric resources were identified.

Field Inspection

A site reconnaissance was conducted during both investigations of the project site. The May, 1988 site reconnaissance included the 5-acre vacant portion of the project site. No evidence of historic or prehistoric resources were found on the site. The February, 1992 site reconnaissance included an inspection of the entire project site. However, the only native soils exposed to be inspected was located in the 5-acre vacant portion of the project site. Possible indicators of cultural resources would include, but are not limited to, darker than surrounding soils, concentrations of stone, bone, or shellfish remains, any artifacts of these materials, ash, charcoal, or fire altered rock. No evidence of historic or prehistoric resource were found on the site.

2. Cultural Resource Impacts

Thresholds of Significance

For the purposes of this project, a cultural resource impact is considered significant if the project will:

- cause a substantial adverse change in the significance of a historic resource; or
- disrupt or adversely effect an important archaeological resource.

No indications of historic use or prehistoric occupation or use of the area were discovered during the field inspections. Based upon the literature review and field investigation, there is a low potential for impacting cultural resources. However, visual inspection of the ground surface over the majority of the project site was impossible due to the presence of pavement and buildings. While the potential for the presence of cultural materials is low, it is possible that future earthmoving activities could uncover some evidence of prehistoric occupation.

- **Development of the proposed project may uncover buried cultural resources. (Significant Impact)**

3. Mitigation Measures

The following mitigation measures would reduce or minimize impacts to cultural resources.

- **In the event that archaeological traces are encountered, all construction within a 50-meter radius of the find would be halted, the Director of Planning, Building and Code Enforcement would be notified, and an archaeologist will be retained to examine the find and make appropriate recommendations.**

- **If human remains are discovered, the Santa Clara County Coroner will be notified. The Coroner would determine whether or not the remains were Native American. If the Coroner determines that the remains are not subject to his authority, he would notify the Native American Heritage Commission, who would attempt to identify descendants of the deceased Native American.**

- **If the Director of Planning, Building and Code Enforcement finds that the archaeological find is not a significant resource, work would resume only after the submittal of a preliminary archaeological report and after provisions for reburial and ongoing monitoring are accepted. Provisions for identifying descendants of a deceased Native American and for reburial would follow the protocol set forth in Appendix K of the CEQA Guidelines. If the site is found to be a significant archaeological site, a mitigation program will be prepared and submitted to the Director of Planning, Building and Code Enforcement for consideration and approval, in conformance with the protocol set forth in Appendix K of the CEQA Guidelines.**

- **A final report would be prepared when a find is determined to be a significant archaeological site, and/or when Native American remains are found on the site. The final report would include background information on the completed work, a description and list of identified resources, the disposition and curation of these resources, any testing, other recovered information, and conclusions.**

Conclusion: With the inclusion of the mitigation program described above, potential impacts to subsurface archaeological resources would be reduced to a less than significant level. **(Less than Significant Impact with Mitigation)**

K. ENERGY

This section was prepared pursuant to CEQA Guidelines Section 15126(c), which requires that EIRs include a discussion of the appropriate mitigation for reducing energy impacts.

Development of the project would result in the consumption of energy in three forms: 1) the fuel energy consumed by construction vehicles; 2) bound energy in construction materials such as asphalt, steel, concrete, pipes, and manufactured or processed materials such as milled lumber and glass; and 3) operational use of energy by future site residents for transportation and utilities.

The project would be subject to the provisions of Title 24 of the California Administrative Code, which sets energy efficient design standards for non-residential buildings. Development of the project would have an indirect influence on the energy consumed in automobile travel. By redeveloping an existing shopping center site adjacent to major roadways and nearby transit, it would make most efficient use of existing City utilities and services and may serve to minimize residents' commutes to work and/or shopping.

- **The project would use a typical amount of energy consumption for the redevelopment of a typical residential/commercial project. (Less than Significant Impact)**

Conclusion: Although development of the project would contribute incrementally to the use of energy for development an ongoing maintenance, the impact is considered less than significant.

L. UTILITIES AND SERVICE SYSTEMS

1. Existing Setting

The project is located within the City of San Jose Urban Service Area.

Sanitary Sewer/Wastewater Treatment

The sanitary sewer system that serves the existing development primarily consists of small laterals from the site that are connected to the City mains in Stevens Creek and Winchester Boulevard. A six-inch sanitary sewer main extends along Winchester Boulevard adjacent to the westerly site boundary, and an eight inch main extends along Stevens Creek, adjacent to the northerly site boundary. A six-inch sanitary sewer line is located in Hemlock Avenue adjacent to the eastern site boundary.

Wastewater treatment service for the area is provided by the City of San Jose. The Water Pollution Control Plant (WPCP) is located in Alviso, and owned by the Cities of San Jose and Santa Clara. The WPCP provides primary, secondary, and tertiary treatment of wastewater. The City's level of service goal for sewage is 167 million gallons per day (mgd). The WPCP currently processes an estimated 134 mgd of effluent (dry weather peak). There is no anticipated increase in capacity planned for the next 10 to 15 years.

The WPCP is currently operating under a 120 mgd (dry weather) flow trigger. This requirement is based upon the State Water Resources Board and the Regional Water Quality Control Board (RWQCB) concerns over the effects of additional freshwater discharges from the WPCP on saltwater marsh habitat, and pollutant loading to the Bay from the WPCP. In response to these issues, the City of San Jose has prepared the South Bay Action Plan, to prevent degradation of the salt water marshland habitat and study the discharge of metals from the WPCP in excess of RWQCB standards. In addition, a Clean Bay Strategy has been developed by the City of San Jose and the agencies tributary to the WPCP, to address water conservation and the pollutant loading to the Bay. The Clean Bay Strategy has identified numerous programs and projects in the areas of increased education and awareness, pollutant source detection, and greater regulatory requirements to reduce pollutant levels. The imposition of additional regulatory requirements as a result of the flow trigger has not yet occurred. However, the RWQCB may require additional control measures to be implemented at any time it deems necessary.

Water Service

The project area is located within the limits of the San Jose Water Company service area. The existing facilities are adequate to meet the current fire flow and domestic service requirements within the area. The primary water mains extend along Stevens Creek Boulevard, adjacent to the northerly site boundary, and along Winchester Boulevard, adjacent to the westerly site boundary. Additional water lines are located in Monroe Street and Hemlock Avenue, which provide service to the residents and businesses.

Electricity and Natural Gas

Electric and gas service is provided by Pacific Gas and Electric (PG&E). Existing facilities currently extend on to the project site and serve the Town and Country Village shopping center.

Solid Waste

Commercial solid waste collection in San Jose is provided by a number of non-exclusive service providers, and the waste may be disposed of at any of the four privately owned landfills in San Jose. The existing disposal facilities in San Jose include the Newby Island Sanitary Landfill, Guadalupe Mines Rubbish Disposal Site, Kirby Canyon Sanitary Landfill, and Zanker Road Disposal and Recycling Center.

Collection of waste and recyclables from attached residential developments is provided by the Green Team, under an exclusive franchise with City of San Jose. Disposal of residential waste occurs at Newby Island Landfill, where the City has secured capacity for the next 22 years.

According to the Source Reduction and Recycling Element prepared for the City of San Jose and the County-wide Integrated Waste Management Plan, there is sufficient landfill capacity for Santa Clara County needs for at least 30 more years. Recycling services are available to most businesses from private recyclers. The City of San Jose Environmental Services Department also offers information and assistance to businesses wishing to recycle, or to expand their recycling activities.

2. Impacts to Utilities and Service Systems

Thresholds of Significance

For the purposes of this project, a utilities and service system impact is considered significant if the project will:

- breach published national, state, or local standards relating to solid waste or litter control; or
- adversely affect a major utility line or facility; or
- result in a substantial increase in the demand for public services; or
- use fuel, water, or energy in a wasteful manner; or
- extend a sewer trunk line with capacity to serve new development.

Sanitary Sewer/Wastewater Treatment

The existing commercial uses on the project site generate approximately 80,000 gallons per day, based upon the City's sewage generation rates. The proposed project would generate approximately 700,000 gallons per day of sewage, based upon the City's sewage generation rates. The proposed project would increase the sewage generated from the project site by approximately 620,000 gallons per day. Several existing City of San Jose sanitary sewer lines are located adjacent to the site; however, it is has not been determined whether the existing lines are adequate to serve the project. The minimum performance standard for sanitary sewer lines is level of service D. Level of service D is defined as restricted flow during peak flow conditions. The increase in demand for sanitary sewer capacity from the proposed project is considered a significant impact.

Water Service

The existing commercial uses on the project site generate a demand for approximately 24,309 gallons per day, based upon the City's water use generation rates. The proposed project will use approximately 90,000 gallons per day of water, based upon the City's water use generation rates. The proposed project would increase the demand for water use on the site by approximately 65,691 gallons per day. The project will require standard connections from existing water facilities adjacent to the project site. There is sufficient capacity to provide water for the proposed project; therefore, the increase in water demand is considered a less than significant impact.

Electricity and Natural Gas

The project will required standard connections from existing electric and gas facilities in the area. The increase in demand for electric and gas services is considered a less than significant impact.

Solid Waste

The existing commercial uses on the site generate approximately 8,250 pounds of solid waste per day, based upon the City's solid waste generation rates. Development of the proposed project would result in the generation of approximately 27,000 pounds of solid waste per day, based upon the City's solid waste generation rates. The proposed project would increase the solid waste generated on the site by approximately 18,750 pounds per day. Approximately half of the waste generated from the site would be diverted from landfill disposal to recycling, assuming the current diversion rates being achieved in San Jose. Given the capacity for landfill disposal in the City of San Jose, the project would result in less than significant solid waste impacts.

- **Based on preliminary Public Works analysis, there may be insufficient capacity within the existing sanitary sewer system to serve the proposed project. (Significant Impact)**

3. Mitigation Measures for Utility and Services Impacts

Sanitary Sewer System

Should it be determined prior to issuance of a PD Permit that the existing sanitary sewer system does not contain sufficient capacity to serve the project, the project would implement some or all of the following mitigation measures, as required.

- **Upsize the existing 8-inch sanitary sewer that runs from Stevens Creek Boulevard to the existing 10-inch sewer line in Valley Fair.**

- **The proposed project may be redesigned to sewer from both the 10-inch in Valley Fair, and the existing 6-inch line which runs under Route 280 from Dudley Avenue to Moorpark Avenue.**

- **Upsize the existing 10-inch line sanitary sewer line that runs through Valley Fair from Stevens Creek Boulevard to Forest Avenue.**

- **Construct a new sanitary sewer line along Winchester Boulevard from the project site to Forest Avenue.**

Conclusion: With the implementation of the above measures, as required, the significant impact to the sanitary sewer system would be reduced to a less than significant level. **(Less than Significant Impact with Mitigation)**

III. AVAILABILITY OF PUBLIC SYSTEMS

Unlike utilities, public services are provided to the community as a whole, usually from a central location or from a defined set of nodes. The resource base for delivery of the services, including the physical service delivery mechanisms, are financed on a community-wide basis, usually from a unified or integrated financial system. The service delivery agency can be a city, county, service or other special district. Usually new development will create an incremental increase in the demand for these services; the amount of the demand will vary widely, depending on both the nature of the development (residential *vs.* industrial, for instance) and the type of service, as well as on the specific characteristics of the development (such as senior housing *vs.* family housing). The impacts of a particular project on public services will, therefore, generally be a fiscal impact. By increasing the demand for a service, a project could potentially cause an eventual increase in the cost of providing the service. CEQA does not require an analysis of fiscal impacts.

CEQA analysis is required if the increased demand is of sufficient size to trigger the need for a new facility (such as a school or fire station), since the new facility would have a physical impact on the environment.

While not required by CEQA, discussion of fiscal impacts is permitted in an EIR where the issue may result in an environmental impact. The City of San Jose, therefore, includes a discussion of potential impacts on public services in EIRs prepared for land use and development projects.

1. Fire Protection

Fire protection for the project site is provided by the San Jose Fire Department. The San Jose Fire Department responds to all fires, hazardous material spills, and medical emergencies (including injury accidents) in the project area. The fire stations that would respond to emergency calls at the project and their response times are as follows:

	Station Location	Response Time	Standard
First Due	Station 10, 511 S. Monroe Street	1 minute	4 minutes
Second Due	Station 4, 710 Leigh Avenue	4 minutes	6 minutes
Ladder Truck	Station 4, 710 Leigh Avenue	4 minutes	6 minutes

All response times will be within the recommended limits.

2. Police Protection

Police protection services are provided to the site by the City of San Jose Police Department (SJPD). Officers patrolling the project area are dispatched from police headquarters, located at 201 West Mission Street. The SJPD presently consists of approximately 1,250 sworn officers and 425 civilian employees.

The project site is located within Beat No. N-2 of the SJPD's service area. Beat N-2 services an area of 1.53 square miles and contains approximately 12,645 residents. In 1995, Beat N-2 had a total of 1,704 crimes, consisting of 1,102 misdemeanors and 602 felonies. The most frequent misdemeanors were petty theft, malicious mischief, and car clout. The most frequent felonies were grand theft, patrolable auto theft, and aggravated assault. Beat N-2 had approximately 135 crimes per 1,000 population.

3. Schools

The project site is located within the Campbell Union Elementary School District (K-8) and the Campbell Union High School District. The district consists of five open schools, including one high school and four elementary and middle schools. All Campbell Union Elementary schools and the Campbell Union High School are currently at or near capacity.

The project will add additional students to the Campbell Union Elementary School District and the Campbell Union High School District. Based on a student generation factor of 0.17 students per dwelling unit, the project could generate approximately 204 students that would attend schools in the Campbell Union Elementary School District and Campbell Union High School District.

State law (Government Code Section 65996) specifies an acceptable method of offsetting a project's effect on the adequacy of school facilities as the payment of school impact fees prior to issuance of a building permit. The school district is responsible for implementing the measures specified by Government Code 65996 that would partially offset project-related increases in student enrollment.

4. Parks

Santana Park, which is located approximately 600 feet from the southeasterly corner of the site, is the closest public park and recreational facility to the project site. Santana Park is a 5 acre park which serves the existing populations in the area. It contains a turf field, a baseball diamond, and picnic tables.

The project area is currently deficient in public park resources.[12] The project proponent attempted to purchase some of the land which separates the project from Santana Park (at the northerly terminus of Baywood Avenue), and was told the property was not for sale. While the land is not intensively developed (it contains an antenna farm and parking), it is owned by Pacific Bell, who indicated that they did not intend to sell it. That would be the most feasible location for an expansion of the park, should such an expansion be proposed. The project was therefore unable to include an expansion of existing public park facilities.

The proposed project would contribute to an increase in the existing park resources deficiency. The proposed project would provide on-site recreational areas and open spaces through the project. This would not offset the project related increases in demand for park resources. The projected new dwelling units could result in the need for up to 9.6 acres of public neighborhood/community serving parkland, based on the General Plan benchmark of 3.5 acres of parkland per 1,000 population.

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[12] Personal communication with Joel Slavit, 1995.

As discussed in Section I(E). Consistency With Relevant Plans and Policies, the City's parks and Recreation Level of Service Policy is implemented through application of the City's Park Impact Fee and Parkland Dedication ordinances. The standards set forth in Section 19.38.050 of the Municipal Code are .003 acres/dwelling unit, with an occupancy rate for multi-family development of 2.029. Credit is given for both private open space and recreation improvements provided by a project, and for public park and recreation improvements. This project will be conditioned to meet the requirements of these ordinances.

Conclusion: The project as proposed will provide insufficient park or open space resources to serve the proposed residential development based on the General Plan goal.

IV. ALTERNATIVES TO THE PROPOSED PROJECT

CEQA requires that an EIR identify alternatives to a project as proposed. The CEQA Guidelines specify that the EIR identify alternatives which "would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project". The purpose of this section is to ascertain whether there are alternatives of design, scope or location which would substantially lessen the significant impacts, even if those alternatives "impede to some degree the attainment of the project objectives" or are more expensive.

An alternative location for this mixed-use project would need to consist of a similarly sized piece of property designated for regional commercial uses. There is no alternative site known to the City of San Jose that would be appropriate for this project. Even if such an alternative location could be identified, development of the project as proposed would have similar regional impacts, and if such an alternative location did not have immediate access to the same amount of regional infrastructure as the project site, the alternative location could have significant localized impacts that were worse than the proposed project.

An all residential alternative for this site was not evaluated because the site is designated by the General Plan for regional commercial uses and development of the site with all residential uses would not conform to the General Plan.

Consideration of a "No Project" alternative is mandatory. As part of the No Project alternative discussion below, there is a discussion of the option of remodeling the existing shopping center. The only significant unmitigated impacts identified from the proposed project is to traffic and air quality. An alternative which might reduce the air quality impact identified for the proposed project would include a reduced scale alternative. Each of these alternatives is discussed below.

A. NO PROJECT ALTERNATIVE

Under the "No Project" alternative, the project site would remain as a 285,000 square foot shopping center and a car dealership on 39 acres. This alternative would avoid the significant traffic impacts to the freeway network that occur as a result of project traffic. As a result, traffic-related increases in air pollutant emissions would not occur. Regional and cumulative air quality impacts would decrease under this alternative, since the additional project-related traffic levels would not occur. This alternative would also avoid any impacts to Burrowing Owls and their habitat.

The No Project alternative would result in traffic noise levels that are less than those resulting from the proposed project. This alternative would also have no construction noise impacts.

This alternative would reduce the potential exposure of residential populations to hazardous materials. This alternative would not result in an increase in surface runoff and nonpoint source pollution and would avoid the removal of the existing ordinance-sized trees

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The No Project alternative would not meet the primary objective of redeveloping the Town and Country Village site with additional leasable floor area and providing residential uses in a mixed use environment.

Conclusion

This alternative is environmentally superior to the proposed project, since it avoids the impacts of the project. However, the No Project alternative does not meet the objectives of the project.

B. REDUCED SCALE ALTERNATIVE

A design alternative to the project as presently proposed would be a smaller development, representing a less intense use of the site. A possible development scenario would be 487,500 square feet of commercial/retail uses, 900 multi-family residential units, and one 100-room hotel. This represents a reduction by approximately 25% of the proposed project size.

Potential for Mitigating Significant Impacts

The extent to which this smaller project might reasonably be expected to result in lesser project impacts is discussed below for each of the areas of significant impact identified for the proposed project.

Traffic Impacts

The proposed project includes mitigation to reduce the potential traffic impacts to a less than significant level. Under the Reduced Scale alternative, the traffic generated by the project would be reduced proportionally. This alternative would also result in significant traffic impacts to the freeways in the area. Like the project, this alternative would have similar impacts to local intersections which would require intersection improvements to reduce the traffic impacts to less than significant level. Even a project half the size of the proposed project would cause 1% impacts to two of the local intersections (Stevens Creek/Monroe and Stevens Creek/Winchester), and would still require mitigation. Since one of the intersections, Stevens Creek/Winchester, is partly in another jurisdiction, the reduced scale alternative would also have a significant unmitigated impact on that intersection.

Air Quality Impacts

The Reduced Scale alternative would generate less traffic, as discussed above, which in turn would cause less of an air quality impact. The project would still create significant contributions to regional air pollution.

Cumulative Impacts

The development of a project that is reduced by 25% below the proposed project size would still contribute to cumulatively significant traffic impacts on the nearby freeways, to regional air quality impacts, and to the regionally significant loss of Burrowing Owl habitat.

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Other Impacts

Like the proposed project, this alternative would result in potential water quality impacts, possible impacts to Burrowing Owls, the removal of ordinance-sized trees, would expose humans to contaminated soils, and could potentially disturb undiscovered cultural resources. All of these impacts could be reduced to a less than significant level with mitigation measures similar to those included in the project.

Conclusion

Since this alternative does not avoid the significant impacts associated with the project and reduces those impacts by only an incremental amount, this alternative is not environmentally superior to the project.

C. REMODELING COMMERCIAL/ADDITION OF RESIDENTIAL ALTERNATIVE

Under this alternative, the project would involve updating and remodeling the existing shopping center, and development of residential uses on the vacant portion of the site. The existing uses, an auto dealership and retail commercial development that includes a theater, would remain for at least the short-term, with new uses allowed subject to the existing C-3 Regional Commercial zoning of the property. The remodel would involve the approximately 285,000 square feet of existing retail commercial uses, and development of a maximum of 250 multi-family dwelling units on approximately 9.5 acres.

Potential for Mitigating Significant Impacts

The extent to which the above-described project may reasonably be expected to result in lesser project impacts is discussed below for each of the areas of significant impact identified for the proposed project.

Traffic Impacts

Under this Remodel/Residential alternative, traffic from the remodeled commercial space would be at the same volume calculated for the existing shopping center, and would be substantially less than that expected from the proposed project's commercial and hotel components. An approximately 79% reduction in the number of residential units as proposed in this alternative could be expected to decrease projected traffic from the residential component of the proposed project proportionately. In total, an approximate 90% reduction in the number of additional daily trips, compared to the proposed project, is expected under this alternative.

With this alternative, all of the significant traffic impacts anticipated from the proposed project would be avoided, including the unmitigated impacted to area freeways and to the intersection of Stevens Creek/Winchester. Improvements to Stevens Creek/Monroe and Winchester/Moorpark would not be necessary because impacts to those intersections would also be less than significant.

Air Quality Impacts

As discussed above, the only major projected increase in traffic for this alternative would result from an addition of up to 250 dwelling units to the existing shopping center. The proposed project itself did not cause exceedances of the 1-hour or 8-hour standards for carbon monoxide, nor did it contribute substantially to such an exceedance. This alternative would, therefore, contribute substantially less to local carbon monoxide concentrations than the proposed project, also resulting in a less than significant effect.

The proposed project would have a significant unavoidable impact on regional air quality. The air quality analysis states that a decrease in traffic of 42% would be required to avoid this adverse impact. This alternative would decrease the additional daily trips by 90%, which would result in a less than significant impact on regional air quality.

Construction-related air quality impacts of this alternative would be less than those anticipated from the proposed project, particularly because demolition of the existing center would not occur. Similar mitigation measures for the remodeling and construction of the residential component would, however, be required for this alternative to reduce construction impacts to a less than significant level.

Cumulative Impacts

The development of this alternative would still contribute incrementally to regionally significant traffic impacts on freeways, to cumulatively significant congestion at the intersection of Stevens Creek/Monroe, and to the cumulatively significant loss of Burrowing Owl habitat.

Other Impacts

Like the proposed project, this alternative would result in water quality impacts, possible impacts to Burrowing Owls, and could disturb undiscovered cultural resources. Remodeling could require the removal of some of the ordinance size trees on the site. Construction of the residential portion of this alternative could result in exposure of humans to contaminated soils, but the likelihood is reduced compared to the proposed project. All of these impacts could be reduced to a less than significant level with mitigation measures similar to those included in the project.

Conclusion

This alternative is environmentally superior to the project as proposed in that it would reduce traffic and air quality impacts to a less than significant level. The alternative would, however, contribute to cumulatively significant traffic congestion and Burrowing Owl habitat loss.

This alternative would not meet the primary project objectives, nor does it meet the Major Strategies, Economic Development and Urban Design goals and policies of the General Plan, as set forth in the section of this EIR entitled "Description of the Project."

V. SIGNIFICANT UNAVOIDABLE IMPACTS

If this project is implemented, it would result in significant unavoidable regional air quality impacts and significant increases in traffic congestion on six freeway segments and at one local intersection, Winchester/Stevens Creek. The proposed project, together with other pending and reasonably foreseeable growth in the area, would result in significant unavoidable cumulative air quality and traffic impacts. In addition, the project will contribute incrementally to a cumulatively significant loss of Burrowing Owl habitat in the region. All other impacts of the project could be reduced to a less than significant level with the identified mitigation measures, as described in the EIR.

VI. CUMULATIVE IMPACTS

The CEQA Guidelines section 15130 states that an EIR should discuss cumulative impacts "when they are significant". The discussion does not need to be in as great detail as is necessary for project impacts, but is to be "guided by the standards of practicality and reasonableness". The purpose of the cumulative analysis is to allow decision makers to better understand the potential impacts which might result from approval of past, present and reasonably foreseeable future projects, in conjunction with the proposed project.

Based on the analysis in this EIR, the cumulative impacts identified as being significant are the project's traffic and air quality impacts. In addition, the project's contribution to loss of Burrowing Owl habitat regionally was evaluated.

To prepare the cumulative analysis, the City of Santa Clara was asked to provide lists of pending projects currently undergoing environmental analysis, and lists of projects which were approved but not yet built. The list was used together with similar information from the City of San Jose. The projects which were approved but not yet built were included in the "Background" conditions which were utilized as the base case against which the project traffic impacts were evaluated in Section II (B) of this EIR.

In order to meet the intent of the cumulative analysis requirement, the following discussion reflects the information available from the two cities as of the date of circulation of this EIR. In other words, all traffic analyses prepared for pending development that had been submitted to the respective cities and that would potentially impact the same area as the project addressed in this EIR is included in this cumulative analysis. The cumulative analysis includes the 261,000 square foot Valley Fair Mall expansion and a few small vacant parcels.

It should be noted that a cumulative impact analysis can only look at what is "reasonably foreseeable". Projects which are proposed now may actually be built in phases, or may not be built for many years. The actual date at which all of this development would be completed is unknown, but it is assumed for the purposes of this analysis to occur within the next three years (by the year 2000).

In the interest of ensuring that decision makers have an idea of what might be a worst case condition, the analysis below assumes that all of these projects would be built with no more than the infrastructure the projects themselves are proposing.

Cumulative Traffic Impacts

The total traffic under cumulative with project conditions includes existing volumes, plus growth, plus traffic from approved but not yet constructed developments, plus projected increases in traffic from the Valley Fair expansion, plus projected increases in traffic from the Town & Country Village redevelopment.

City of San Jose Methodology

The analysis results for cumulative with project conditions using the San Jose method are shown in Table 26. The results show that six of the study intersections would operate at an unacceptable LOS E or worse during at least one of the peak hours under cumulative with project conditions. The intersection of Hamilton Avenue and Winchester Boulevard would operate at LOS E in the PM peak hour. The intersection of Monroe Street and Stevens Creek Boulevard would operate at LOS E in the PM peak hour. The intersection of Moorpark Avenue and San Tomas Expressway would operate at LOS E in the AM peak hour and at LOS F in the PM peak hour. The intersection of San Tomas Expressway and Stevens Creek Boulevard would operate at LOS F in the PM peak hour. The intersection of Moorpark Avenue and Winchester Boulevard would operate at LOS E in the AM peak hour. The intersection of Stevens Creek Boulevard and Winchester Boulevard would operate at LOS E in the PM peak hour. All other study intersections would operate at an acceptable LOS D or better in both of the peak hours under cumulative with project conditions. The intersection level of service calculation sheets for the San Jose method are included in Appendix A.

CAPSSI-11 Methodology

The analysis results for cumulative with project conditions using the CAPSSI-11 method are shown in Table 27. The results show that all of the regional Santa Clara study intersections would operate at an acceptable LOS E or better during both peak hours under cumulative with project conditions. The intersection level of service calculation sheets for the CMP method are included in Appendix A.

Freeway Segments

Cumulative traffic conditions were analyzed for the 16 previously identified freeway segments. Cumulative traffic volumes were estimated by adding to the base model forecasts the estimated freeway trips from the Valley Fair expansion, from the development of vacant parcels, and from the proposed Town & Country redevelopment project. The freeway traffic volumes are included in Appendix A.

The results of the cumulative freeway analysis are summarized in Table 28. The results show that on 10 of the 16 freeway segments the mixed-flow lanes would operate at an unacceptable LOS F during at least one of the peak hours under cumulative conditions. The results also show that on six of these 10 study segments the volume of project traffic would constitute at least one percent of freeway capacity.

Cumulative Interchange Ramp Analysis

Ramp volumes under cumulative with project conditions were estimated by adding to existing volumes trips from approved projects, trips from the Valley Fair expansion, trips from the development of vacant parcels, and trips from the Town & Country redevelopment project. The ramp volumes are included in Appendix A. The results of the ramp analysis are summarized in Appendix A. The results show that all ten freeway ramps analyzed would operate at an acceptable LOS D or better during all peak hours.

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Table 26
Cumulative Project-San Jose Methodology

		Cumulative Without Project		Cumulative With Project		
Intersection	Peak Hour	V/C	LOS	V/C	LOS	% INC.
I-280/Moorpark	AM	0.370	A	0.386	A	4.44
	PM	0.471	A	0.507	A	8.01
I-880/Stevens Creek	AM	0.266	A	0.281	A	5.63
	PM	0.411	A	0.446	A	8.45
Bascom/Moorpark	AM	0.808	D	0.808	D	0.11
	PM	0.752	C	0.752	C	0.00
Bascom/Naglee	AM	0.810	D	0.809	D	0.17
	PM	0.660	B	0.668	B	1.09
Bascom/San Carlos	AM	0.893	D	0.896	D	0.27
	PM	0.843	D	0.851	D	0.71
Bellerose/Stevens Creek	AM	0.490	A	0.495	A	0.93
	PM	0.654	B	0.664	B	2.19
Hamilton/Winchester	AM	0.749	C	0.749	C	0.04
	PM	0.932	E	0.933	E	0.06
Hedding/Monroe	AM	0.491	A	0.493	A	0.24
	PM	0.542	A	0.556	A	2.20
Hedding/Winchester	AM	0.547	A	0.550	A	0.52
	PM	0.670	B	0.684	B	1.63
Monroe/Stevens Creek	AM	0.494	A	0.556	A	13.67
	PM	0.870	D	**0.950**	**E**	**10.15**
Moorpark/San Tomas	AM	0.917	E	0.917	E	0.00
	PM	1.037	F	1.040	F	0.22
San Tomas/Stevens Creek	AM	0.836	D	0.848	D	1.30
	PM	1.044	F	1.050	F	0.97
Moorpark/Winchester	AM	0.924	E	**0.940**	**E**	**1.66**
	PM	0.817	D	0.852	D	4.52
Saratoga/Stevens Creek	AM	0.613	B	0.618	B	1.22
	PM	0.819	D	0.828	D	1.46
Stevens Creek/Emporium	AM	0.434	A	0.434	A	0.00
	PM	0.547	A	0.615	B	11.11
Stevens Creek/Redwood	AM	0.409	A	0.428	A	5.22
	PM	0.582	A	0.633	B	8.90
Stevens Creek/Winchester	AM	0.677	B	0.677	B	0.24
	PM	0.899	D	**0.954**	**E**	**22.51**
Tisch/Winchester	AM	0.434	A	0.469	A	8.72
	PM	0.740	C	0.767	C	4.48
Williams/Winchester	AM	0.765	C	0.766	C	0.26
	PM	0.520	A	0.524	A	0.82
Winchester/Olsen	AM	0.418	A	0.498	A	11.03
	PM	0.475	A	0.546	A	6.44
Winchester/Olin	AM	0.421	A	0.462	A	3.33
	PM	0.434	A	0.449	A	0.00

Note: Significant impacts indicated in **bold**.

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Table 27
Cumulative Intersection Levels of Service-CAPSSI-11

		Cumulative Without Project		Cumulative With Project		
Intersection	Peak Hour	Average Intersection Delay[a]	LOS	Average Intersection Delay[a]	LOS	Increase in Critical Movement[b]
I-280/Moorpark	AM	16	C	16	C	0
	PM	17	C	17	C	0
I-880/Stevens Creek	AM	16	C	17	C	1
	PM	17	C	20	C	3
San Tomas/Stevens Creek	AM	37	D	38	D	2
	PM	55	E	57	E	1
San Tomas/Moorpark	AM	37	D	37	D	0
	PM	37	D	38	D	1
Saratoga/Stevens Creek	AM	32	D	32	D	0
	PM	36	D	36	D	0
Stevens Creek/Winchester	AM	29	D	30	D	0
	PM	43	E	46	E	13

Whole intersection average delay expressed in seconds per vehicle.
Increase in critical movement delay.

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Table 28
Cumulative Freeway Segment-Level of Service

				Cumulative With Project[a]								Town & Country Project Traffic				
				Mixed-Flow Lane Traffic Volumes				HOV Lane Traffic Volumes					Mixed-Flow Lane		HOV Lane	
Freeway	Segment	Direction	Peak Hour	Capacity	Volume	V/C	LOS	Capacity	Volume	V/C	LOS	Total Volume	Volume	% Capacity	Volume	% Capacity
I-280	Lawrence to Saratoga	SB	AM	7,000	7,025	1.00	F	2,000	461	0.23	A	55	52	0.7%	3	0.0%
			PM		7,576	1.08	F		786	0.39	B	124	**112**	**1.6%**	12	0.0%
I-280	Saratoga to Winchester	SB	AM	7,000	7,224	1.03	F	2,000	400	0.20	A	55	52	0.7%	3	0.0%
			PM		7,409	1.06	F		652	0.33	A	124	**114**	**1.6%**	10	0.0%
I-280	Winchester to I-880	SB	AM	6,000	4,251	0.71	C	2,000	336	0.17	A	0	0	0.0%	0	0.0%
			PM		4,284	0.71	C		564	0.28	A	0	0	0.0%	0	0.0%
I-280	I-880 to Bascom	SB	AM	8,000	6,977	0.87	D	2,000	483	0.24	A	69	65	0.8%	4	0.0%
			PM		7,301	0.91	D		675	0.34	A	73	67	0.8%	6	0.0%
I-280	Bascom to Meridian	SB	AM	8,000	7,463	0.93	D	N/A	N/A	N/A	N/A	69	69	0.9%	N/A	N/A
			PM		7,976	1.00	E		N/A	N/A	N/A	73	73	0.9%	N/A	N/A
I-280	Meridian to Bascom	NB	AM	9,000	7,793	0.87	D	N/A	N/A	N/A	N/A	40	40	0.4%	N/A	N/A
			PM		7,430	0.83	D		N/A	N/A	N/A	97	97	1.1%	N/A	N/A
I-280	Bascom to I-880	NB	AM	9,000	8,511	0.95	E	2,000	443	0.22	A	40	38	0.4%	2	0.0%
			PM		8,044	0.89	D		516	0.26	A	97	91	1.0%	6	0.0%
I-280	I-880 to Winchester	NB	AM	6,000	5,572	0.93	D	2,000	465	0.23	A	0	0	0.0%	0	0.0%
			PM		5,059	0.84	D		580	0.29	A	0	0	0.0%	0	0.0%
I-280	Winchester to Saratoga	NB	AM	7,000	7,662	1.09	F	2,000	497	0.25	A	108	**101**	**1.4%**	7	0.0%
			PM		7,315	1.05	F		526	0.26	A	83	**77**	**1.1%**	6	0.0%
I-280	Saratoga to Lawrence	NB	AM	7,000	7,171	1.02	F	2,000	474	0.24	A	108	**101**	**1.4%**	7	0.0%
			PM		6,826	0.98	E		508	0.25	A	83	77	1.1%	6	0.0%
I-880	Bascom to Stevens Creek	SB	AM	7,000	5,118	0.73	C	N/A	N/A	N/A	N/A	87	87	1.2%	N/A	N/A
			PM		7,743	1.11	F		N/A	N/A	N/A	96	**96**	**1.4%**	N/A	N/A
I-880	Stevens Creek to I-280	SB	AM	6,000	3,493	0.58	C	N/A	N/A	N/A	N/A	25	25	0.4%	N/A	N/A
			PM		6,177	1.03	F		N/A	N/A	N/A	31	31	0.5%	N/A	N/A
SR 17	I-280 to Hamilton	SB	AM	8,000	5,277	0.66	C	N/A	N/A	N/A	N/A	25	25	0.3%	N/A	N/A
			PM		8,576	1.07	F		N/A	N/A	N/A	31	31	0.4%	N/A	N/A
SR 17	Hamilton to I-280	NB	AM	7,000	7,557	1.08	F	N/A	N/A	N/A	N/A	16	16	0.2%	N/A	N/A
			PM		5,401	0.77	C		N/A	N/A	N/A	39	39	0.6%	N/A	N/A
I-880	I-280 to Stevens Creek	NB	AM	6,000	6,034	1.01	F	N/A	N/A	N/A	N/A	16	16	0.3%	N/A	N/A
			PM		3,697	0.62	C		N/A	N/A	N/A	39	39	0.7%	N/A	N/A
I-880	Stevens Creek to Bascom	NB	AM	7,000	7,111	1.02	F	N/A	N/A	N/A	N/A	171	**171**	**2.4%**	N/A	N/A
			PM		5,302	0.76	C		N/A	N/A	N/A	131	131	1.9%	N/A	N/A

Cumulative Air Quality Impacts

The carbon monoxide analysis indicated that in the future carbon monoxide concentrations are expected to decline, despite project and cumulative traffic increases. The project, singularly or cumulatively, would not increase the number of violations of the carbon monoxide standards that are forecast, nor "contribute substantially to an existing or projected violation".

Project-related regional emissions do exceed the significance thresholds for ozone precursors (NOx) and PM_{10}. BAAQMD guidance states that any proposed project that would individually have a significant air quality impact (based on BAAQMD thresholds of significance) would also be considered to have a significant cumulative air quality impact. Since the project would have a significant regional impact individually, it would also have a cumulatively significant regional air quality impact.

Cumulative Loss of Burrowing Owl Habitat

The project level analysis determined the loss of approximately 4.5 acres of potential Burrowing Owl habitat to be a less than significant impact since the acreage is of marginal quality, and is less than the 6.5 acres CDFG considers necessary to support one or a pair of owls. The regional loss of Burrowing Owl habitat has been quite substantial in the past 10 years. Hundreds of acres of potential Burrowing Owl habitat have been developed within this time frame and development is pending or proposed on hundreds more acres countywide. With each loss of potential Burrowing Owl habitat, the value of the remaining habitat increases to the point where any loss is cumulatively significant. The project's approximate 4.5 acre impact of Burrowing Owl habitat would incrementally contribute to a cumulatively significant loss of Burrowing Owl habitat.

2. Mitigation for Cumulative Impacts

Traffic and Circulation

Winchester Boulevard and Moorpark Avenue

Intersection operations would be restored to LOS D with the addition of a second eastbound left-turn lane, the conversion of the existing eastbound shared through-left-turn lane to an exclusive through lane, and the addition of a second westbound left-turn lane. These improvements can be accommodated within the existing curb-to-curb width. This mitigation measure is the same as mitigation measure identified in the project level analysis.

Winchester Boulevard and Stevens Creek Boulevard

Intersection operations would be restored to LOS D or better with the addition of a second northbound left-turn lane and a second southbound left-turn lane. These improvements cannot be accommodated within the existing curb-to-curb width. Implementation of the improvements would entail the removal and reconstruction of the curb, gutter, and sidewalk, repaving and restriping in both directions of each of the south and north approaches, acquisition of 7 feet of right-of-way along the west edge of the north approach over a distance of 400 feet, and the loss of approximately 20 parking spaces along the west side of the south approach. This mitigation measure is the same as mitigation measure identified in the project level analysis. Because part of the necessary improvements would be to Winchester Boulevard north of Stevens Creek Boulevard, which is in the City of Santa Clara, the improvement cannot be imposed by the City of San Jose.

Stevens Creek Boulevard and Monroe Street

Intersection operations would be restored to LOS D with the addition of a fourth eastbound through lane. This improvement cannot be accommodated within the existing curb-to-curb width. Implementation of the improvement would entail the removal and reconstruction of the curb, gutter, and sidewalk, repaving and restriping of the west and east approaches in the eastbound direction, and acquisition of 10 feet of right-of-way along the south edge of Stevens Creek Boulevard over a distance of 600 feet from Monroe Street to the southbound on-ramp to I-880. The additional eastbound through lane will transition into the second lane of the existing single-lane southbound on-ramp to I-880. The southbound on-ramp will need to be widened from one lane to two. Striping and signage should be installed that warns drivers of the transition of the eastbound shoulder lane to a southbound on-ramp to I-880. This mitigation measure is the same as the mitigation measure identified in the project level analysis.

I-280 and I-880

Traffic congestion in Santa Clara County is a regional problem. Much of the congestion identified in this analysis is on freeways, and much of the existing congestion in the northern Santa Clara County area is the result of through traffic movements. The Santa Clara County Congestion Management Plan identifies preparation of deficiency plans as an appropriate response to significant impacts on regional facilities. The VTA Congestion Management Program is preparing a Countywide Deficiency Plan which will address many of the facilities in this area. Assuming that the Countywide Deficiency Plan will include a scenario for improving conditions on the regional facilities impacted by this cumulative traffic, participation in the implementation programs for these Deficiency Plans are the only mechanisms identified which might mitigate some of the traffic impacts identified on the freeways from cumulative development.

The CEQA Guidelines discuss the fact that mitigation for cumulative impacts may be different than for individual project-specific impacts. The Guidelines state that:

> "...the only feasible mitigation for cumulative impacts may involve the adoption of ordinances or regulations rather than the imposition of conditions on a project-by-project basis." [Section 15030]

This implies that a programmatic approach to cumulative mitigation may be necessary. Participation in a Countywide Deficiency Plan would be a similar type of mitigation program. The level of participation by the new developments could be assessed based on a reasonable relationship to the individual development's contribution to cumulative traffic impacts.

Conclusion: Since there is no mechanism in place to achieve mitigation of identified traffic impacts, this would be a significant unavoidable cumulative impact.

Air Quality

Air quality impacts are primarily a result of traffic impacts in the area. Improvements to reduce pollution sources would ultimately result in conformance with air quality standards.

***Conclusion*:** Approval of all proposed developments would contribute to near-term air quality standard exceedances. This would be a significant unavoidable impact. If some pending development is not assumed within the Bay Area Clean Air Plan, cumulative air quality impacts may delay attainment of long-term air quality standards. This would be a significant unavoidable cumulative impact.

Burrowing Owl

Mitigation for the cumulative loss of Burrowing Owl habitat could in the future include the establishment of a County-wide program to set aside a large area(s) of publicly owned, permanent open space and improvement of this habitat for use by Burrowing Owls. Each individual project resulting in a loss of Burrowing Owl habitat could contribute to the improvement and maintenance of this permanent habitat through payment of an impact fee. The level of required participation by each new development project could be assessed, based on a reasonable relationship to the individual development's contribution to the cumulative loss of Burrowing Owl habitat. Through such a mitigation program, permanent, good quality habitat for Burrowing Owls could be retained in perpetuity. Even though there is not yet an established mechanism for preserving owl habitat to mitigate regional impacts, the City of San Jose could begin requiring financial contributions from developers such as the project applicant, to help offset their contribution to regional impacts. Putting money into a fund to pay for acquisition of habitat, upgrading of marginal habitat or maintenance of a regional habitat bank, would not reduce the project's cumulative impacts to a less than significant level, but might be considered to help offset the project's contribution to the cumulatively significant loss of burrowing owl habitat in the region.

The City of San Jose has begun a study of sites that might be acquired and/or protected for long term habitat replacement for burrowing owls in Santa Clara County. The City of San Jose could require that the applicant contribute financially to this habitat replacement program. Although, the City of San Jose has begun a study of the options for setting aside large open space areas as permanent Burrowing Owl breeding and foraging habitat, there is currently no established program.

While the project does result in an incremental loss of habitat, the location and value of the habitat lost makes it of marginal value. Even if the project were to be redesigned to preserve the 4.5 acres of potential habitat, it would not constitute a significant improvement in the regional status of the species or its available habitat.

Conclusion: Until there is a mechanism in place to achieve mitigation of identified impacts to Burrowing Owl foraging habitat, this would contribute incrementally to a significant unavoidable cumulative impact.

VII. GROWTH INDUCING IMPACTS OF THE IMPACTS

The project site is surrounded by commercial, office, and residential land uses. The project does not include construction or extension or infrastructure which currently impedes growth, and therefore, the project is not expected to induce any growth beyond that which constitutes the project itself.

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IX. REFERENCES

Barton-Aschman Associates, Inc. Site Traffic Analysis, December 11, 1997.

Don Ballanti, Air Quality Analysis, October, 1997.

Bay Areas Air Quality Management District, 1991 Clean Air Plan, 1991.

Cooper-Clark & Associates, Geotechnical Investigation of San Jose's Sphere of Influence, 1974.

Federal Emergency Management Agency, Flood Insurance Rate Maps for San Jose, 1988.

Walter Fujczak, City of San Jose Fire Department, personal communication.

H.T. Harvey & Associates, Town and Country Village Burrowing Owl Survey, October, 1997.

Holman & Associates, Town and Country Village, May, 1988, and February, 1992.

Illingworth & Rodkin, Inc., Environmental Nose Assessment, November, 1997.

Mayer, Kenneth E. and William F. Laudenslayer, A Guide to Wildlife Habitats of California, 1988.

San Jose, City of, San Jose 2020 General Plan, December 5, 1995.

Woodward-Clyde Consultants, Preliminary Geotechnical Investigation, Town and Country Shopping Center, August, 1985.

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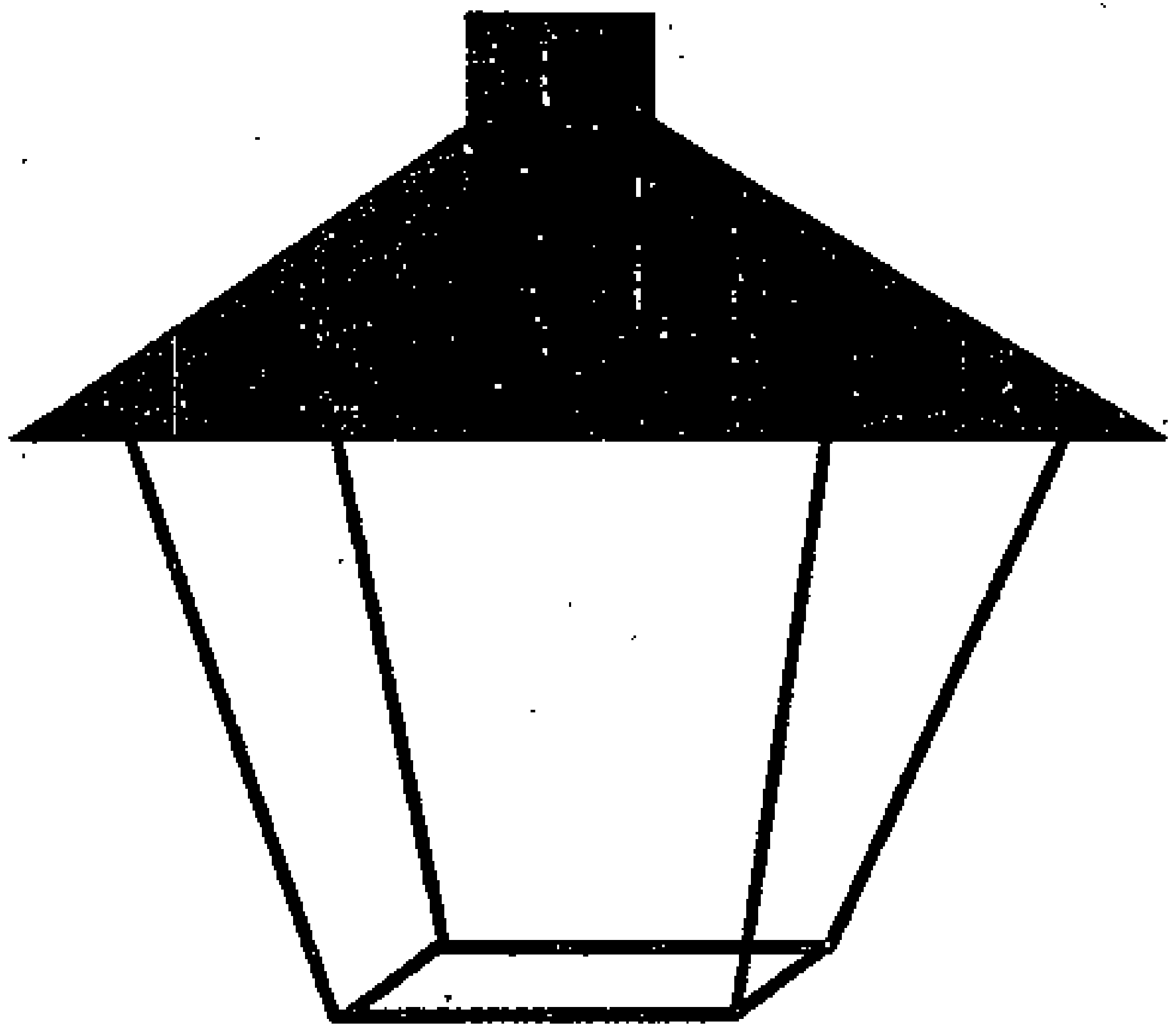
FINAL

ENVIRONMENTAL IMPACT REPORT

TOWN AND COUNTRY VILLAGE



CITY OF SAN JOSE

JUNE 1998

97-036

VOLUME II OF IV : DRAFT EIR APPENDIX A

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APPENDIX A

TRAFFIC ANALYSIS

SITE TRAFFIC ANALYSIS

TOWN AND COUNTRY REDEVELOPMENT

Prepared for

David J. Powers & Associates, Inc.

Prepared by

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PARSONS TRANSPORTATION GROUP

December 11, 1997

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Executive Summary

Project Description

This report presents the results of the traffic analysis conducted for the proposed redevelopment of the Town & Country Village located in San Jose, California. The project, as proposed, consists of replacing the existing 285,000-s.f. shopping center with a new 600,000-s.f. shopping center, 1,200 dwelling units of residential, and two 100-room limited-service hotels. Access to the site will be provided by three full-access signalized driveways, one unsignalized right-turn-only driveway, and one unsignalized full-access driveway.

Methodology

The impacts of the project were evaluated following the guidelines set forth by the City of San Jose and the Santa Clara County Congestion Management Program (CMP). Traffic conditions were evaluated for 21 signalized intersections, 16 directional freeway segments, and 10 freeway interchange ramps. All study intersections were evaluated using the City of San Jose methodology. Six of these intersections are designated CMP intersections, and were evaluated using the CMP-approved methodology. Traffic conditions were evaluated for the following scenarios:

Scenario 1: *Existing Conditions.* Existing peak-hour volumes.

Scenario 2: *Background Conditions.* Existing peak-hour volumes plus growth plus traffic from approved but not yet constructed developments in the area.

Scenario 3: *Project Conditions.* Background peak-hour volumes plus traffic generated by the proposed redevelopment of Town & Country Village.

Scenario 4: *Cumulative Conditions.* Background peak-hour volumes plus traffic generated by the proposed redevelopment of Town & Country Village plus traffic generated by the proposed Valley Fair expansion.

Project Trip Generation

The traffic generated by the project was estimated by applying the appropriate vehicular trip generation rates to the proposed development size. The trip generation rates used are those published in the Institute of Transportation Engineers (ITE) *Trip Generation*, Fifth Edition, 1991. A pass-by trip reduction was applied to the PM peak-hour trip generation estimates. With these reductions, the project as proposed is estimated to generate 14,520 net new daily trips with 728 occurring during the AM peak hour (269 inbound/459 outbound) and 1,133 trips occurring during the PM peak hour (647 inbound/486 outbound). These trips were assigned to the roadway system based on locations of complementary land uses and existing and projected travel patterns in the area.

Project Conditions

The results of the intersection level of service analysis based on the San Jose method are shown in Table ES-1. Based on the City of San Jose method, 5 of the 23 intersections are projected to operate at an unacceptable LOS E or worse during one or both peak hours under project conditions. According to the city policy a project has a significant impact if the addition of project traffic causes a signalized intersection operating at LOS D or better under background conditions to operate at LOS E or F, or if the addition of project traffic increases the critical volume by one percent or more at an intersection already operating at LOS E or F under background conditions. According to this definition, the project would have a significant impact on weekday peak-hour conditions at the intersection of Winchester and Stevens Creek and at the intersection of Winchester and Moorpark. An analysis of Saturday peak-hour conditions did reveal that the project would also impact the intersection of Stevens Creek and Monroe during the Saturday peak hour (2:30 PM to 3:30 PM).

The results of the intersection level of service analysis based on the CMP method are shown in Table ES-2. The results of the analysis indicate that all of the CMP intersections will operate at an acceptable LOS E or better during both peak hours under project conditions. According to the CMP policy, a project has a significant impact if the addition of project traffic causes a signalized intersection operating at LOS E or better under background conditions to operate at LOS F, or if the addition of project traffic increases the critical delay by four or more seconds at an intersection already operating at LOS F under background conditions. According to CMP standards, the project will not have an impact on weekday peak-hour traffic under project conditions.

The analysis showed that the project would significantly impact 6 of the 16 directional freeway segments in the peak hours under project conditions. The results indicate that the project would cause no significant impact on any of the 10 freeway ramps in the peak hours under project conditions. The freeway and ramp level of service analyses are summarized in Table ES-3 and ES-4.

Cumulative Conditions

The potential impacts of the project were also evaluated relative to cumulative conditions. Based on the City of San Jose method, 6 of the 23 intersections are projected to operate at an unacceptable LOS E or worse during one or both peak hours under cumulative conditions. According to the city policy, the project will have a significant impact under cumulative conditions at three of these intersections: Morrpark Avenue and Winchester Boulevard, and Monroe Street and Stevens Creek Boulevard, and Winchester Boulevard and Stevens Creek Boulevard.

The results of the CMP analysis indicate that all of the CMP intersections will operate at an acceptable LOS E or better during both weekday peak hours under cumulative conditions. Based on CMP standards, the project will not have an impact on weekday peak-hour traffic under cumulative conditions.

The analysis showed that the project would significantly impact 6 of the16 directional freeway segments in the peak hours under cumulative conditions. The results indicate that the project would cause no significant impact on any of the 10 freeway ramps in the peak hours under cumulative conditions.

Level of Service Mitigation Measures

Project and cumulative conditions at the intersection of Winchester Boulevard and Moorpark Avenue would be restored to LOS D with the addition of a second eastbound left-turn lane, the conversion of the existing eastbound shared through-left-turn lane to an exclusive through lane, and the addition of a second westbound left-turn lane.

Project and cumulative conditions at the intersection of Winchester Boulevard and Stevens Creek Boulevard would be restored to LOS D with the addition of a second northbound left-turn lane and a second southbound left-turn lane.

Project and cumulative conditions at the intersection of Stevens Creek Boulevard and Monroe Street would be restored to LOS D with the addition of a fourth eastbound through lane that would transition into the second lane of the existing single-lane southbound on-ramp to I-880. The southbound on-ramp will need to be widened from one lane to two.

Project and cumulative conditions on the impacted segments of I-280 and I-880 would be restored to an acceptable LOS E or better with the installation of additional lanes on each impacted segment. However, the addition of freeway lanes would entail widening the I-280 and I-880 freeways over the length of the impacted segments, improvements that are considered to be infeasible.

Site Access

A site access analysis was performed in order to ensure the smooth and efficient flow of traffic into and out of the site. The site access analysis comprised several different components: an evaluation of the proposed access at Redwood Avenue and three site access alternatives, in terms of impacts on local streets and impacts on level of service; and an assessment of the adequacy of existing vehicle storage capacity at the signalized intersections accessing the site. The traffic analysis was also expanded to include the Saturday peak hour for intersections adjacent to the site.

The site access analysis showed that, although none of the access alternatives would significantly impact intersection operations, the proposed project access and two of the site access alternatives could contribute to considerable increases in traffic on adjacent local streets.

Table ES-1
Intersection Levels of Service—SJ Method

Intersection	Peak Hour	Count Date	Existing V/C	Existing LOS	Background V/C	Background LOS	Project Conditions V/C	Project Conditions LOS	Project Conditions % INC.	Cumulative Conditions V/C	Cumulative Conditions LOS
I-280/Moorpark	AM	4/9/97	0.357	A	0.363	A	0.379	A	4.52	0.380	A
	PM	10/96	0.439	A	0.457	A	0.493	A	8.26	0.498	A
I-880/Stevens Creek	AM	4/15/97	0.228	A	0.254	A	0.269	A	5.91	0.273	A
	PM	10/96	0.343	A	0.386	A	0.421	A	9.00	0.434	A
Bascom/Moorpark	AM	4/17/97	0.799	C	0.804	D	0.804	D	0.11	0.805	D
	PM	4/17/97	0.744	C	0.747	C	0.747	C	0.00	0.747	C
Bascom/Naglee	AM	10/31/95	0.746	C	0.804	D	0.803	D	0.17	0.805	D
	PM	4/17/97	0.639	B	0.646	B	0.654	B	1.12	0.659	B
Bascom/San Carlos	AM	4/15/97	0.849	D	0.861	D	0.865	D	0.28	0.867	D
	PM	4/15/97	0.784	C	0.827	D	0.835	D	0.72	0.843	D
Bellerose/Stevens Creek	AM	6/23/95	0.409	A	0.454	A	0.457	A	1.00	0.459	A
	PM	4/17/97	0.598	A	0.628	B	0.641	B	2.29	0.646	B
Hamilton/Winchester	AM	4/17/97	0.740	C	0.740	C	0.740	C	0.04	0.742	C
	PM	4/17/97	0.913	E	0.913	E	0.913	E	0.06	0.914	E
Hedding/Monroe	AM	4/17/97	0.486	A	0.486	A	0.487	A	0.24	0.488	A
	PM	4/17/97	0.532	A	0.532	A	0.545	A	2.24	0.550	A
Hedding/Winchester	AM	4/17/97	0.534	A	0.536	A	0.540	A	0.53	0.541	A
	PM	4/17/97	0.647	B	0.647	B	0.660	B	1.69	0.669	B
Monroe/Stevens Creek	AM	4/9/97	0.488	A	0.467	A	0.528	A	14.40	0.533	A
	PM	7/8/97	0.757	C	0.819	D	0.899	D	10.76	**0.924**	**E**
Moorpark/San Tomas	AM	4/17/97	0.914	E	0.914	E	0.914	E	0.00	0.915	E
	PM	10/96	1.003	F	1.033	F	1.036	F	0.22	1.040	F
San Tomas/Stevens Creek	AM	4/17/97	0.831	D	0.831	D	0.842	D	1.31	0.838	D
	PM	7/9/97	1.032	F	1.035	F	1.040	F	0.98	1.046	F
Moorpark/Winchester	AM	10/1/97	0.893	D	0.909	E	**0.924**	**E**	**1.68**	**0.928**	**E**
	PM	7/10/97	0.771	C	0.798	C	0.832	D	4.63	0.839	D
Saratoga/Stevens Creek	AM	5/21/96	0.578	A	0.606	B	0.613	B	1.23	0.613	B
	PM	10/96	0.786	C	0.813	D	0.822	D	1.48	0.826	D
Stevens Creek/Emporium	AM	4/15/97	0.417	A	0.420	A	0.420	A	0.00	0.423	A
	PM	4/15/97	0.496	A	0.519	A	0.589	A	11.78	0.602	B
Stevens Creek/Redwood	AM	4/10/97	0.395	A	0.396	A	0.416	A	5.31	0.422	A
	PM	4/10/97	0.475	A	0.546	A	0.596	A	9.37	0.609	B
Stevens Creek/Winchester	AM	4/16/97	0.640	B	0.651	B	0.654	B	0.25	0.659	B
	PM	7/10/97	0.850	D	0.860	D	**0.915**	**E**	**3.41**	**0.939**	**E**
Tisch/Winchester	AM	4/16/97	0.371	A	0.414	A	0.447	A	9.14	0.449	A
	PM	4/16/97	0.675	B	0.718	C	0.745	C	4.60	0.755	C
Williams/Winchester	AM	4/16/97	0.752	C	0.752	C	0.754	C	0.26	0.757	C
	PM	4/16/97	0.502	A	0.502	A	0.507	A	0.84	0.511	A
Winchester/Olsen	AM	4/17/97	0.424	A	0.428	A	0.490	A	11.23	0.493	A
	PM	4/17/97	0.476	A	0.480	A	0.529	A	6.67	0.534	A
Winchester/Olin	AM	4/16/97	0.427	A	0.431	A	0.451	A	3.42	0.454	A
	PM	4/16/97	0.440	A	0.444	A	0.435	A	0.00	0.442	A

'Note: Significant impacts indicated in **bold**.

Table ES-2

Intersection Levels of Service—CMP Method

Intersection	Peak Hour	Count Date	Existing Average Intersection Delay[a]	Existing LOS	Background Average Intersection Delay[a]	Background LOS	Project Conditions Average Intersection Delay[a]	Project Conditions LOS	Project Conditions Increase in Critical Movement[b]	Cumulative Conditions Average Intersection Delay[a]	Cumulative Conditions LOS
I-280/Moorpark	AM	4/9/97	16	C	16	C	16	C	0	16	C
	PM	10/96	17	C	17	C	17	C	0	17	C
I-880/Stevens Creek	AM	4/15/97	14	B	16	C	17	C	1	17	C
	PM	10/96	16	C	17	C	19	C	2	20	C
San Tomas/Stevens Creek	AM	4/17/97	37	D	37	D	38	D	1	38	D
	PM	7/9/97	53	E	54	E	55	E	2	56	E
San Tomas/Moorpark	AM	4/17/97	37	D	37	D	37	D	0	37	D
	PM	10/96	35	D	37	D	37	D	0	37	D
Saratoga/Stevens Creek	AM	5/21/96	31	D	32	D	32	D	0	32	D
	PM	10/96	36	D	36	D	36	D	0	36	D
Stevens Creek/Winchester	AM	4/16/97	29	D	29	D	29	D	0	29	D
	PM	10/96	37	D	40	D	41	E	8	42	E

[a] Whole intersection average delay expressed in seconds per vehicle.
[b] Increase in critical movement delay.

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Table ES-3
Freeway Segment Levels of Service—Cumulative Conditions

				Cumulative With Project*								Town & Country Project Traffic				
				Mixed-Flow Lane Traffic Volumes				HOV Lane Traffic Volumes					Mixed-Flow Lane		HOV Lane	
Freeway	Segment	Direction	Peak Hour	Capacity	Volume	V/C	LOS	Capacity	Volume	V/C	LOS	Total Volume	Volume	% Capacity	Volume	% Capacity
I-280	Lawrence to Saratoga	SB	AM	7,000	7,013	1.00	F	2,000	461	0.23	A	55	52	0.7%	3	0.7%
			PM		7,550	1.08	F		783	0.39	B	124	112	1.5%	12	1.5%
I-280	Saratoga to Winchester	SB	AM	7,000	7,213	1.03	F	2,000	399	0.20	A	55	52	0.7%	3	0.8%
			PM		7,383	1.05	F		649	0.32	A	124	114	1.5%	10	1.5%
I-280	Winchester to I-880	SB	AM	6,000	4,251	0.71	C	2,000	336	0.17	A	0	0	0.0%	0	0.0%
			PM		4,284	0.71	C		564	0.28	A	0	0	0.0%	0	0.0%
I-280	I-880 to Bascom	SB	AM	8,000	6,946	0.87	D	2,000	481	0.24	A	69	65	0.9%	4	0.8%
			PM		7,262	0.91	D		672	0.34	A	73	67	0.9%	6	0.9%
I-280	Bascom to Meridian	SB	AM	8,000	7,430	0.93	D	N/A	N/A	N/A	N/A	69	69	0.9%	N/A	N/A
			PM		7,934	0.99	E		N/A	N/A	N/A	73	73	0.9%	N/A	N/A
I-280	Meridian to Bascom	NB	AM	9,000	7,762	0.86	D	N/A	N/A	N/A	N/A	40	40	0.5%	N/A	N/A
			PM		7,399	0.82	D		N/A	N/A	N/A	97	97	1.3%	N/A	N/A
I-280	Bascom to I-880	NB	AM	9,000	8,482	0.94	E	2,000	441	0.22	A	40	38	0.4%	2	0.4%
			PM		8,015	0.89	D		514	0.26	A	97	91	1.1%	6	1.2%
I-280	I-880 to Winchester	NB	AM	6,000	5,572	0.93	D	2,000	465	0.23	A	0	0	0.0%	0	0.0%
			PM		5,059	0.84	D		580	0.29	A	0	0	0.0%	0	0.0%
I-280	Winchester to Saratoga	NB	AM	7,000	7,635	1.09	F	2,000	495	0.25	A	108	101	1.3%	7	1.4%
			PM		7,300	1.04	F		525	0.26	A	83	77	1.1%	6	1.1%
I-280	Saratoga to Lawrence	NB	AM	7,000	7,144	1.02	F	2,000	472	0.24	A	108	101	1.4%	7	1.5%
			PM		6,811	0.97	E		507	0.25	A	83	77	1.1%	6	1.2%
I-880	Bascom to Stevens Creek	SB	AM	7,000	5,063	0.72	C	N/A	N/A	N/A	N/A	87	87	1.7%	N/A	N/A
			PM		7,698	1.10	F		N/A	N/A	N/A	96	96	1.2%	N/A	N/A
I-880	Stevens Creek to I-280	SB	AM	6,000	3,477	0.58	C	N/A	N/A	N/A	N/A	25	25	0.7%	N/A	N/A
			PM		6,157	1.03	F		N/A	N/A	N/A	31	31	0.5%	N/A	N/A
SR 17	I-280 to Hamilton	SB	AM	8,000	5,261	0.66	C	N/A	N/A	N/A	N/A	25	25	0.5%	N/A	N/A
			PM		8,556	1.07	F		N/A	N/A	N/A	31	31	0.4%	N/A	N/A
SR 17	Hamilton to I-280	NB	AM	7,000	7,541	1.08	F	N/A	N/A	N/A	N/A	16	16	0.2%	N/A	N/A
			PM		5,386	0.77	C		N/A	N/A	N/A	39	39	0.7%	N/A	N/A
I-880	I-280 to Stevens Creek	NB	AM	6,000	6,018	1.00	F	N/A	N/A	N/A	N/A	16	16	0.3%	N/A	N/A
			PM		3,682	0.61	C		N/A	N/A	N/A	39	39	1.0%	N/A	N/A
I-880	Stevens Creek to Bascom	NB	AM	7,000	7,063	1.01	F	N/A	N/A	N/A	N/A	171	171	2.4%	N/A	N/A
			PM		5,252	0.75	C		N/A	N/A	N/A	131	131	2.5%	N/A	N/A

*Cumulative traffic volumes and HOVL proportions are based on 2010 CUA model projections with estimated Town & Country and Valley Fair trips added.

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Table ES-4
Interchange Ramp Levels of Service

Interchange	Ramp	Type	Capacity	Period	Existing Conditions			Background Conditions			Project Conditions			Cumulative Conditions		
					Volume	V/C	LOS	Volume	V/C	LOS	Volume	V/C	LOS	Volume	V/C	LOS
I-880/Stevens Creek	SB to WB	Diagonal	2,000	AM	493	0.247	A	639	0.320	A	726	0.363	A	732	0.366	A
			2,000	PM	628	0.314	A	682	0.341	A	878	0.439	A	904	0.452	A
			2,000	Sat	850	0.425	A	904	0.452	A	1,100	0.550	A	1,132	0.566	A
I-880/Stevens Creek	SB to EB	Loop	1,800	AM	136	0.076	A	136	0.076	A	136	0.076	A	136	0.076	A
			1,800	PM	168	0.093	A	168	0.093	A	168	0.093	A	168	0.093	A
			1,800	Sat	179	0.099	A	179	0.099	A	179	0.099	A	179	0.099	A
I-880/Stevens Creek	WB to NB	Diagonal	2,000	AM	218	0.109	A	218	0.109	A	218	0.109	A	218	0.109	A
			2,000	PM	179	0.090	A	179	0.090	A	179	0.090	A	179	0.090	A
			2,000	Sat	234	0.117	A	234	0.117	A	234	0.117	A	234	0.117	A
I-880/Stevens Creek	WB to SB	Loop	1,800	AM	160	0.089	A	160	0.089	A	160	0.089	A	160	0.089	A
			1,800	PM	354	0.197	A	354	0.197	A	354	0.197	A	354	0.197	A
			1,800	Sat	270	0.150	A	270	0.150	A	270	0.150	A	270	0.150	A
I-880/Stevens Creek	NB to EB	Diagonal	2,000	AM	272	0.136	A	272	0.136	A	272	0.136	A	272	0.136	A
			2,000	PM	272	0.136	A	272	0.136	A	272	0.136	A	272	0.136	A
			2,000	Sat	501	0.251	A	501	0.251	A	501	0.251	A	501	0.251	A
I-880/Stevens Creek	NB to WB	Loop	1,800	AM	1,004	0.558	A	1,101	0.612	B	1,157	0.643	B	1,171	0.651	B
			1,800	PM	1,051	0.584	A	1,144	0.636	B	1,280	0.711	C	1,329	0.738	C
			1,800	Sat	1,245	0.692	B	1,338	0.743	C	1,474	0.819	D	1,534	0.852	D
I-880/Stevens Creek	EB to SB	Diagonal	2,000	AM	483	0.242	A	527	0.264	A	621	0.311	A	629	0.315	A
			2,000	PM	1,374	0.687	B	1,513	0.757	C	1,617	0.809	D	1,666	0.833	D
			2,000	Sat	1,364	0.682	B	1,503	0.752	C	1,607	0.804	D	1,667	0.834	D
I-880/Stevens Creek	EB to NB	Loop	1,800	AM	252	0.140	A	318	0.177	A	489	0.272	A	493	0.274	A
			1,800	PM	504	0.280	A	531	0.295	A	662	0.368	A	688	0.382	A
			1,800	Sat	750	0.417	A	777	0.432	A	908	0.504	A	940	0.522	A
I-280/Winchester	to NB	Diagonal	2,000	AM	713	0.357	A	757	0.379	A	865	0.433	A	868	0.434	A
			2,000	PM	729	0.365	A	768	0.384	A	851	0.426	A	869	0.435	A
			2,000	Sat	689	0.345	A	728	0.364	A	811	0.406	A	833	0.417	A
I-280/Winchester	from SB	Diagonal	2,000	AM	769	0.385	A	785	0.393	A	840	0.420	A	845	0.423	A
			2,000	PM	1,068	0.534	A	1,080	0.540	A	1,204	0.602	B	1,222	0.611	B
			2,000	Sat	865	0.433	A	877	0.439	A	1,001	0.501	A	1,023	0.512	A

1.
Introduction

This report presents the results of the traffic impact analysis conducted for the proposed redevelopment of the Town & Country Village in San Jose, California. The impacts of the proposed project were estimated following the guidelines set forth by the City of San Jose and the Santa Clara County Congestion Management Program (CMP).

The proposed project consists of replacing the existing 285,000-s.f. shopping center with a new 600,000-s.f. shopping center, 1,200 dwelling units of residential, and two 100-room limited-service hotels. The project site is generally bounded by Stevens Creek Boulevard to the north, Winchester Boulevard to the west, and Tisch Way to the south. The site location and the surrounding roadway network are presented on Figure 1. As shown on the site plan, direct access to the project site will be provided via three full-access signalized driveways at Winchester Boulevard and Olsen Drive, Winchester Boulevard and Olin Avenue, and Stevens Creek Boulevard and Emporium, at Redwood Avenue and Hemlock Avenue (see Figure 2). There is also the possibility of additional access at the unsignalized driveway on Dudley Avenue.

The purpose of the traffic analysis is to estimate the traffic impacts of the proposed development on the transportation system in the vicinity of the site. Twenty-one signalized intersections were evaluated in the study. These are identified on Figure 1. All 21 study intersections were evaluated using the City of San Jose methodology. Six of the 21 study intersections are designated CMP intersections and accordingly were evaluated also using the methodology approved by the CMP. The intersections are identified below. CMP intersections are denoted with an asterisk (*):

I-280 eastbound off-ramp and Moorpark Avenue*
I-880 southbound off-ramp and Stevens Creek Boulevard*
Bascom Avenue and Moorpark Avenue
Bascom Avenue and Naglee Avenue
Bascom Avenue and San Carlos Street
Bellerose Drive and Stevens Creek Boulevard
Hamilton Avenue and Winchester Boulevard

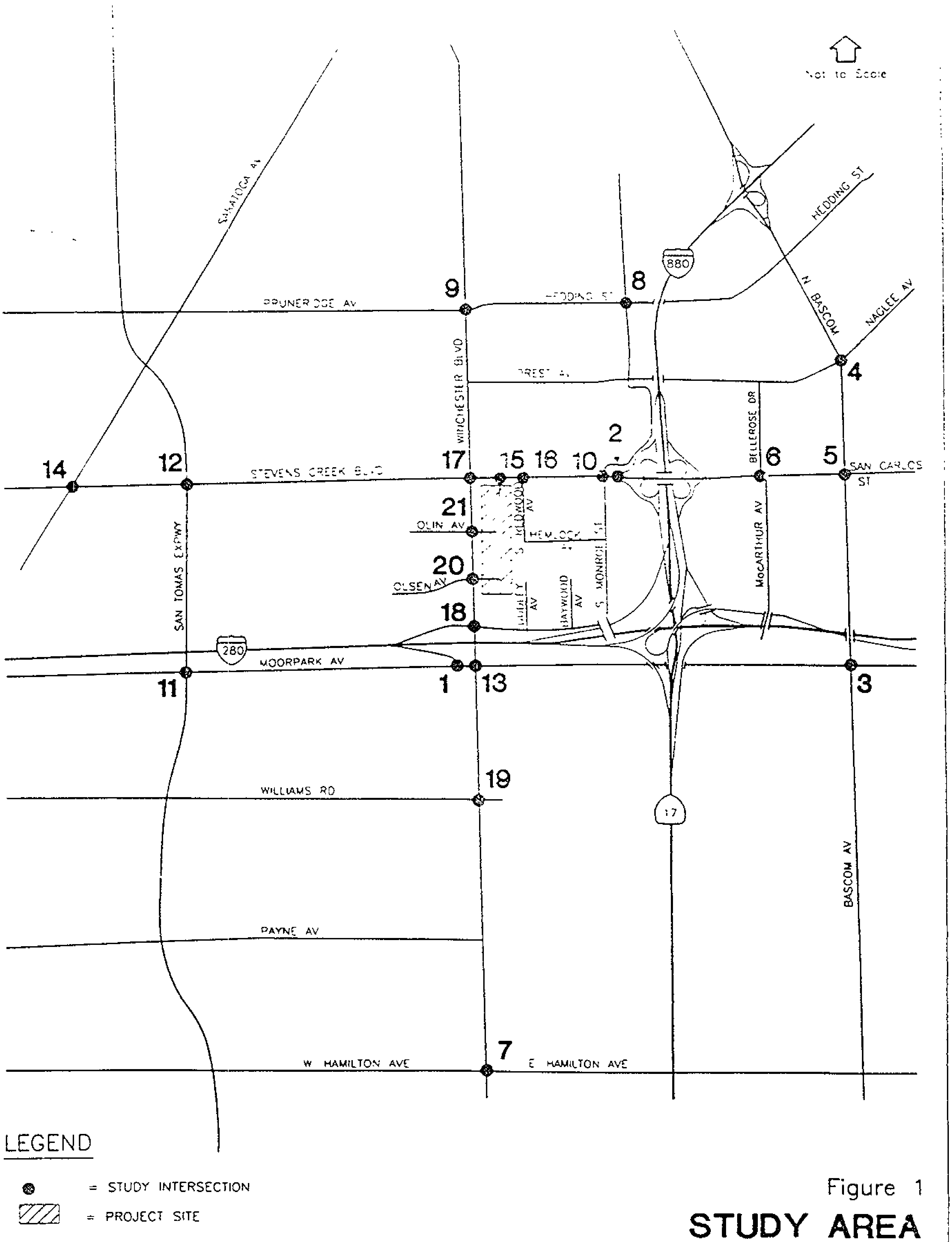

Figure 1

STUDY AREA

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Figure 2

97-036 **SITE PLAN**

Hedding Street and Monroe Street
Hedding Street and Winchester Boulevard
Monroe Street and Stevens Creek Boulevard
Moorpark Avenue and San Tomas Expressway*
San Tomas Expressway and Stevens Creek Boulevard*
Moorpark Avenue and Winchester Boulevard
Saratoga Avenue and Stevens Creek Boulevard*
Stevens Creek Boulevard and Emporium
Stevens Creek Boulevard and Redwood Avenue
Stevens Creek Boulevard and Winchester Boulevard*
Tisch Way and Winchester Boulevard
Williams Road and Winchester Boulevard
Winchester Boulevard and Olsen Drive
Winchester Boulevard and Olin Avenue

The study intersections were selected based on a previous study completed by the City of San Jose (*Stevens Creek/Winchester Area Traffic Study, August 1993*). Traffic conditions at the study intersections were evaluated for the following scenarios:

Scenario 1: *Existing Conditions.* Existing peak-hour volumes.

Scenario 2: *Background Conditions.* Existing peak-hour volumes plus growth plus traffic from approved but not yet constructed developments in the area.

Scenario 3: *Project Conditions.* Background peak-hour volumes plus traffic generated by the proposed redevelopment of Town & Country Village.

Scenario 4: *Cumulative Conditions.* Background peak-hour volumes plus traffic generated by the proposed redevelopment of Town & Country Village plus traffic generated by the proposed Valley Fair expansion.

The analysis also included an evaluation of traffic conditions on several segments of freeway and on several freeway interchange ramps. These segments and ramps are identified below.

Freeway Segments

I-280 between Lawrence Expressway and Saratoga Avenue
I-280 between Saratoga Avenue and Winchester Boulevard
I-280 between Winchester Boulevard and I-880
I-280 between I-880 and Bascom Avenue
I-280 between Bascom Avenue and Meridian Avenue
I-880 between Bascom Avenue and Stevens Creek Boulevard
I-880 between Stevens Creek Boulevard and I-280
SR 17 between I-280 and Hamilton Avenue

Interchange Ramps

I-880 at Stevens Creek Boulevard—eight ramps
I-280 at Winchester Boulevard—two ramps

Traffic conditions on the freeway segments are analyzed for each direction of traffic separately.

Chapter 2 describes existing conditions in the study area. Chapter 3 describes future background conditions. Chapter 4 presents project conditions. Scenarios 4 and 5, Cumulative Conditions, are presented in Chapter 5. Chapter 6 describes site access conditions. Chapter 7 describes impacts and recommended mitigation measures.

2.
Existing Conditions

This chapter provides a description of existing conditions in terms of the roadway network facilities and operations, transit services, and pedestrian/bicycle access.

Roadway Network

Regional access to the project site is provided by I-880 and I-280:

I-880 is a six-lane freeway with no high-occupancy vehicle (HOV) lanes. I-880 extends northward to Oakland and southward, as SR 17 south of I-280, to Santa Cruz. Access to the site is provided via a full interchange at Stevens Creek Boulevard.

I-280 is an eight-lane freeway (three mixed-flow lanes and one high-occupancy vehicle (HOV) lane in each direction). I-280 runs in a predominately north/south direction from San Francisco through the peninsula to its junction with I-680 in San Jose. In the South Bay, however, I-280 generally runs in an east/west direction. Access to the site is provided via a partial interchange at Winchester Boulevard.

Local access to the site is provided by Stevens Creek Boulevard, Winchester Boulevard, Moorpark Avenue, and San Tomas Expressway. These roadways are described below:

Stevens Creek Boulevard is a six-lane divided arterial that runs in an east/west direction. The roadway begins as a transition from San Carlos Street west of I-880. Stevens Creek Boulevard provides direct access to the project site via three full-access signalized driveways at the Stevens Creek Boulevard/Emporium, Stevens Creek Boulevard/Redwood Avenue, and Stevens Creek Boulevard/Monroe Street intersections.

Winchester Boulevard is generally a six-lane divided arterial that runs in a north/south direction. South of Stevens Creek Boulevard, Winchester Boulevard is a six-lane facility. North of Stevens Creek

Boulevard. the roadway narrows to four lanes. This facility provides access to the project site via one full-access signalized driveway at the intersection of Winchester Boulevard and Dorcich Avenue.

Moorpark Avenue is a four-lane roadway which runs in an east/west direction. This facility provides access to the site via Winchester Boulevard.

San Tomas Expressway is a six-lane divided expressway which generally runs in a north/south direction. This facility provides access to the site via Moorpark Avenue and Stevens Creek Boulevard.

Existing Bicycle and Pedestrian Facilities

The project site is relatively isolated from any bicycle routes designated by the Santa Clara County Bikeways Network. Sidewalks are available along both sides of Stevens Creek Boulevard and Winchester Boulevard, with pedestrian crossings provided at signalized intersections.

Transit Service

Existing bus service on the surrounding roadway network is provided by the Santa Clara Valley Transportation Authority (VTA). Under existing conditions four bus routes (Routes 60, 23, 24, and 36) provide service within one-quarter mile of the project site. The bus routes directly serving the site are described below.

Route 60 provides service between Los Gatos and Great America Parkway. This line operates on a 15- to 30-minute headway and provides service along Winchester Boulevard adjacent to the site.

Route 23 provides service between Downtown San Jose and San Antonio Shopping Center in Mountain View. This line operates on a 30-minute headway and provides service along Stevens Creek Boulevard near the site.

Route 24 provides service between Downtown San Jose and the California Avenue (Palo Alto) Train Station. This line operates on a 30-minute headway and provides service along Stevens Creek Boulevard near the site.

Route 36 provides service between East San Jose and Vallco Fashion Park. This line operates on a 30-minute headway and provides service along Winchester Boulevard near the site.

Figure 3 illustrates the transit service provided in the vicinity of the site, including the locations of transit stops.

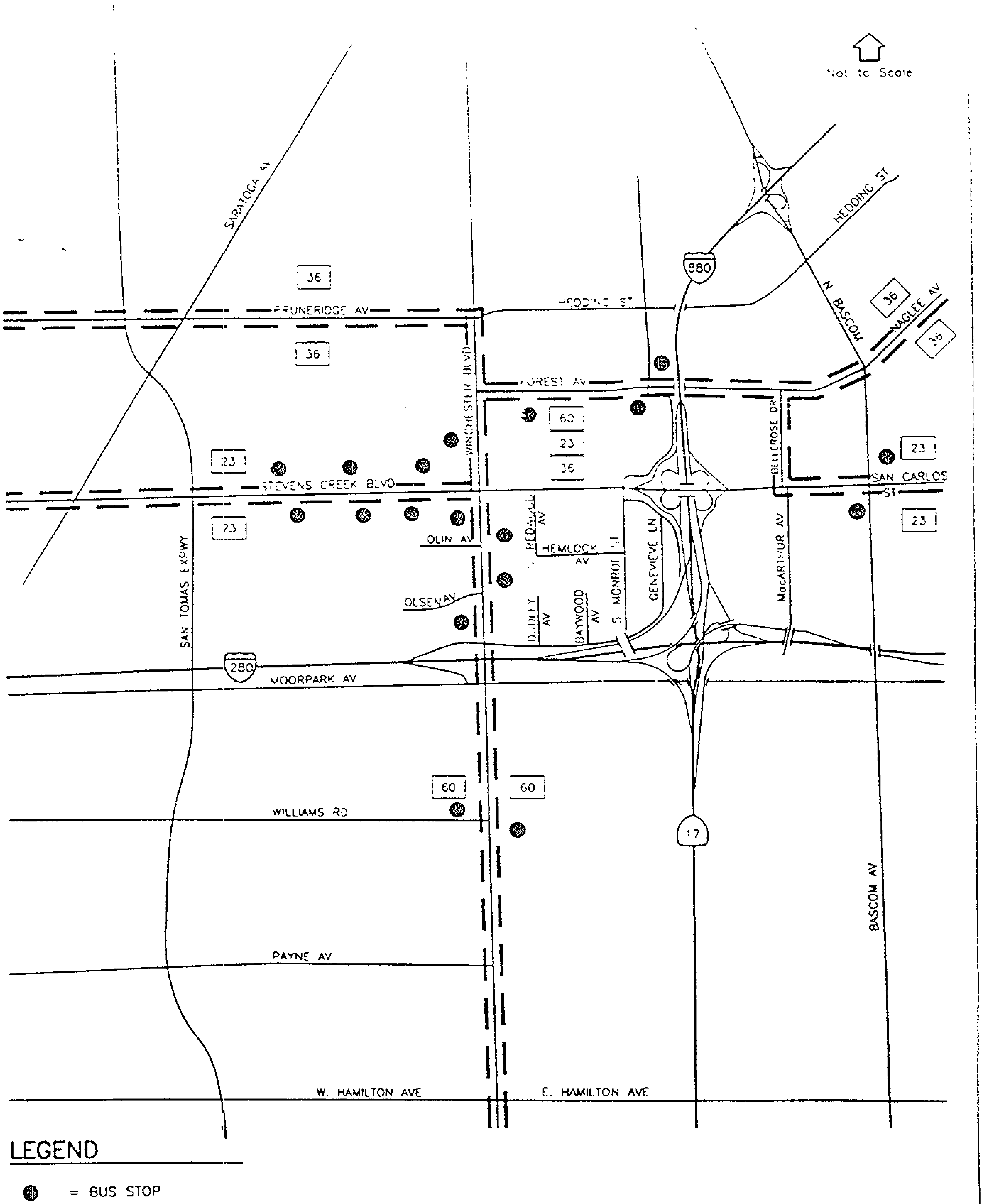

Figure 3

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TRANSIT ROUTES

Existing Intersection Levels of Service

Traffic conditions at the study intersections were evaluated with level of service (LOS) calculations. *Level of service* is a qualitative description of intersection operation, ranging from LOS A, or free-flow conditions, to LOS F, or jammed conditions. Two different level of service methodologies were used in this analysis: the City of San Jose method and the CMP method.

The San Jose method (SJ91) estimates the level of service based on critical volume-to-capacity (V/C) ratios. The volumes of the vehicles in the turning movements that dictate the operation of the intersection are divided by the capacity of those movements. The individual ratios are added to obtain the intersection V/C ratio. The V/C ratio is correlated to a level of service (see Table 1). An acceptable level in the City of San Jose is defined as LOS D or better.

Table 1
Signalized Intersection Level of Service Definitions Using Volume-to-Capacity Ratios

Level of Service	Interpretation	V/C Ratio
A	Uncongested operations; all queues clear in a single signal cycle.	Less Than 0.600
B	Very light congestion; an occasional approach phase is fully utilized.	0.600-0.699
C	Light congestion; occasional backups on critical approaches.	0.700-0.799
D	Significant congestion on critical approaches, but intersection functional. Cars required to wait through more than one cycle during short peaks. No long-standing queues formed.	0.800-0.899
E	Severe congestion with some long-standing queues on critical approaches. Blockage of intersection may occur if traffic signal does not provide for protected turning movements. Traffic queue may block nearby intersections(s) upstream of critical approach(es).	0.900-0.999
F	Total breakdown, stop-and-go operation.	1.000 and Greater

The CMP level of service method evaluates intersection operations based on the average stopped vehicular delay. The City of San Jose also uses this method to evaluate CMP intersections. The average delay is calculated using CAPSSI-11 software and is then correlated to a level of service (see Table 2). The CMP has established LOS E as the minimum acceptable level of service.

Table 2
Intersection Level of Service Definitions Using Average Stopped Vehicular Delay

Level of Service	Description	Average Stopped Delay Per Vehicle (Sec.)
[illegible]	Operations with very low delay occurring with favorable progression and/or short cycle lengths.	≤ than 5.0
B	Operations with low delay occurring with good progression and/or short cycle lengths.	5.1 to 15.0
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	15.1 to 25.0
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	25.1 to 40.0
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	40.1 to 60.0
F	Operation with delays unacceptable to most drivers occurring due to oversaturation, poor progression, or very long cycle lengths.	> 60.0

Existing Average Daily Traffic (ADT) volumes in the study area are shown on Figure 4. Existing peak-hour traffic volumes were obtained from previous studies and supplemented with new intersection turning-movement counts (see Appendix B). The analysis is based on peak-hour (worst-case) volumes; the ADT volumes are provided for information only.

City of San Jose Analysis

The results of the existing conditions analysis using the San Jose method are shown in Table 3. The results show that three of the study intersections currently operate at an unacceptable LOS E or worse during at least one of the peak-hours. The intersection of Hamilton Avenue and Winchester Boulevard operates at LOS E in the PM peak-hour. The intersection of Moorpark Avenue and San Tomas Expressway operates at LOS E in the AM peak-hour and at LOS F in the PM peak hour. The intersection of San Tomas Expressway and Stevens Creek Boulevard operates at LOS F in the PM peak hour. All other study intersections currently operate at an acceptable LOS D or better in both of the peak hours. The intersection level of service calculation sheets for the San Jose method are included in Appendix D.

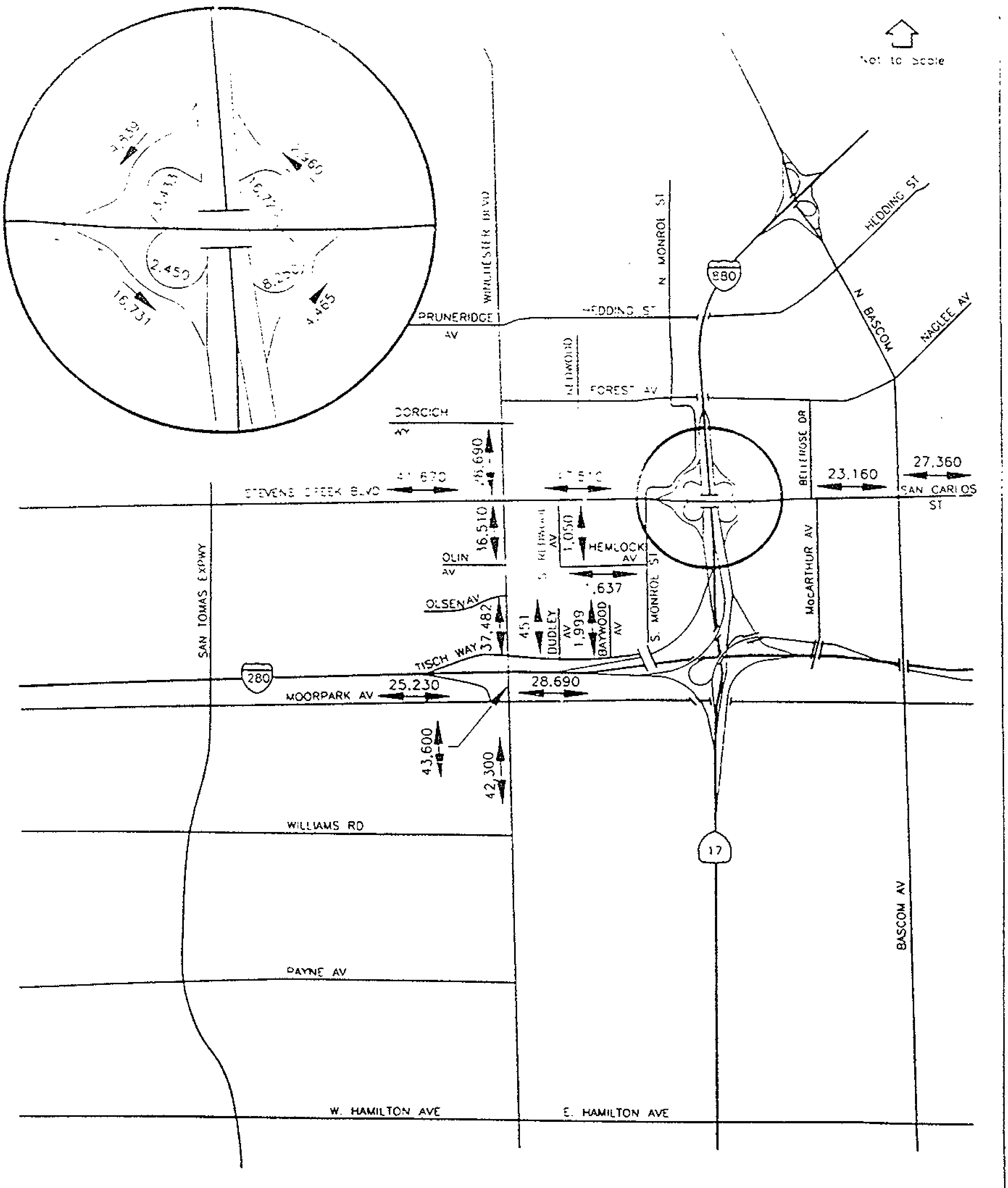

Figure 4

EXISTING AVERAGE DAILY TRIPS (ADT)

Table 3

Existing Intersection Levels of Service—SJ Method

Intersection	Peak Hour	Count Date	V/C	LOS
I-280/Moorpark	AM	4/9/97	0.357	A
	PM	10/96	0.439	A
I-880/Stevens Creek	AM	4/15/97	0.228	A
	PM	10/96	0.343	A
Bascom/Moorpark	AM	4/17/97	0.799	C
	PM	4/17/97	0.744	C
Bascom/Naglee	AM	10/31/95	0.746	C
	PM	4/17/97	0.639	B
Bascom/San Carlos	AM	4/15/97	0.849	D
	PM	4/15/97	0.784	C
Bellerose/Stevens Creek	AM	6/23/95	0.409	A
	PM	4/17/97	0.598	A
Hamilton/Winchester	AM	4/17/97	0.740	C
	PM	4/17/97	0.913	E
Hedding/Monroe	AM	4/17/97	0.486	A
	PM	4/17/97	0.532	A
Hedding/Winchester	AM	4/17/97	0.534	A
	PM	4/17/97	0.647	B
Monroe/Stevens Creek	AM	4/9/97	0.488	A
	PM	7/8/97	0.757	C
Moorpark/San Tomas	AM	4/17/97	0.914	E
	PM	10/96	1.003	F
San Tomas/Stevens Creek	AM	4/17/97	0.826	D
	PM	7/9/97	1.032	F
Moorpark/Winchester	AM	10/1/97	0.893	D
	PM	7/10/97	0.771	C
Saratoga/Stevens Creek	AM	5/21/96	0.578	A
	PM	10/96	0.786	C
Stevens Creek/Emporium	AM	4/15/97	0.417	A
	PM	4/15/97	0.496	A
Stevens Creek/Redwood	AM	4/10/97	0.395	A
	PM	4/10/97	0.475	A
Stevens Creek/Winchester	AM	4/16/97	0.640	B
	PM	7/10/97	0.850	D
Tisch/Winchester	AM	4/16/97	0.371	A
	PM	4/16/97	0.675	B
Williams/Winchester	AM	4/16/97	0.752	C
	PM	4/16/97	0.502	A
Winchester/Olsen	AM	4/17/97	0.424	A
	PM	4/17/97	0.476	A
Winchester/Olin	AM	4/16/97	0.427	A
	PM	4/16/97	0.440	A

CMP Analysis

The results of the existing conditions analysis using the CMP method are shown in Table 4. The results show that all of the CMP study intersections currently operate at an acceptable LOS E or better during both peak-hours. The intersection level of service calculation sheets for the CMP method are included in Appendix E.

Table 4

Existing Intersection Levels of Service—CMP Method

Intersection	Peak Hour	Count Date	Average Intersection Delay[a]	LOS
I-280/Moorpark	AM	4/9/97	16	C
	PM	10/96	17	C
I-880/Stevens Creek	AM	4/15/97	14	B
	PM	10/96	16	C
San Tomas/Stevens Creek	AM	4/17/97	37	D
	PM	7/9/97	53	E
San Tomas/Moorpark	AM	4/17/97	37	D
	PM	10/96	35	D
Saratoga/Stevens Creek	AM	5/21/96	31	D
	PM	10/96	36	D
Stevens Creek/Winchester	AM	4/16/97	29	D
	PM	10/96	37	D

[a] Whole intersection average delay expressed in seconds per vehicle.

Existing Freeway Level of Service

The CMP requires an analysis of traffic conditions on freeway segments that could potentially be impacted by project traffic. Traffic conditions were thus evaluated for the previously identified study segments on I-280, I-880, and SR 17. The freeway analysis is based on the volume-to-capacity (V/C) ratio of each directional freeway segment. The range of acceptable conditions for freeways is LOS E or better, which corresponds to a V/C of 0.999 or lower.

The analysis of existing freeway conditions was based on data provided in *1996 Traffic Volumes on California State Highways* and in the *1995 Annual HOVL Report*, both published by Caltrans. The CMP dictates an assumed freeway capacity of 2,000 vehicles per hour per lane and requires that conditions be analyzed separately for high-occupancy-vehicle (HOV) lanes and mixed-flow (non-HOV) lanes. The existing levels of service on the study segments are shown in Table 5. The results show that the mixed-flow lanes of all 16 study segments currently operate at an unacceptable LOS F during at least one of the peak-hours.

The existing conditions reported here warrant some qualification. The validity of the analysis depends on the accuracy and validity of the traffic volumes used. The only traffic volumes made available by Caltrans are the annually published traffic volumes. These volumes are typically shown to be higher than could possibly be sustained by the roadways. Generally, any volumes that produce a V/C over

1.20 are suspect. As shown in Table 5, the V/C ratio is shown to exceed 1.20 on nine of the sixteen segments, with the V/C ratio reaching nearly 1.70 on one segment. The volumes therefore do not provide meaningful results. The results are reported here because the CMP requires it and because there is no other source for existing freeway traffic volumes.

Existing Interchange Ramp Analysis

Traffic conditions were analyzed for the eight freeway ramps at the I-880/Stevens Creek interchange and for the two freeway ramps at the I-280/Winchester interchange. Existing traffic volumes on the ramps were established from traffic counts conducted specifically for this study (see Appendix B). 24-hour tube counts were conducted on the I-880/Stevens Creek ramps over a continuous period from September 4 to September 12, 1997 and from October 1 to October 6, 1997. The existing volumes on the I-280/Winchester ramps were established from peak-hour intersection turning-movement counts conducted at the adjacent intersections. The ramp volumes are included in Appendix G.

Traffic conditions on the ramps were analyzed for the weekday AM and PM peak hours and also for the Saturday peak hour. There are several reasons to include the Saturday peak hour in the ramp analysis. First, the shopping center use generates the most trips on Saturday, rather than during the weekday commute, so that in the immediate vicinity of Town & Country the total traffic could be greater on Saturday. Second, the I-880/Stevens Creek interchange is located directly adjacent to Town & Country. Third, the ramp counts revealed that on most of the ramps the Saturday peak-hour volumes are higher than the weekday peak-hour volumes. In order to ensure that the analysis does in fact include the worst peak-hour conditions, the Saturday peak hour was therefore included.

The interchange ramps were evaluated on the basis of volume-to-capacity utilization of the ramps. Ramp operations are not addressed by the CMP, but it was assumed for this study that the acceptable range of conditions on ramps is LOS D or better, corresponding to a V/C of 0.899 or less. The ramp capacity varies with design speed of the ramp. Diagonal ramps permit higher speeds than loop ramps and thus have a higher capacity. The assumed ramp capacity is 2,000 vphpl for the diagonal ramps and 1,800 vphpl for the loop ramps, as specified in the Transportation Research Board's *1994 Highway Capacity Manual*. The results of the ramp analysis are summarized in Table 6. The results show that all ten freeway ramps analyzed would operate at an acceptable LOS D or better during all peak hours.

Table 5
Existing Freeway Segment Levels of Service

								Mixed-Flow Lane Traffic Volumes[c]				HOV Lane Traffic Volumes[d]			
Freeway	Segment	Direction	Lanes	Peak Hour	% MFV[a]	Total Volume	Split Volume	Capacity[b]	Volume	V/C	LOS	Capacity[b]	Volume	V/C	LOS
I-280	Lawrence to Saratoga	SB	3+HOV+AUX	AM	0.94	16,000	5,920	7,000	5,565	0.795	D	2,000	355	0.178	A
				PM	0.88		10,080		8,870	1.267	F		1,210	0.605	C
I-280	Saratoga to Winchester	SB	3+HOV+AUX	AM	0.94	20,200	7,474	7,000	7,026	1.004	F	2,000	448	0.224	A
				PM	0.88		12,726		11,199	1.600	F		1,527	0.764	C
I-280	Winchester to I-880	SB	3+HOV	AM	0.94	18,300	6,771	6,000	6,365	1.061	F	2,000	406	0.203	A
				PM	0.88		11,529		10,146	1.691	F		1,383	0.692	C
I-280	I-880 to Bascom	SB	4+HOV	AM	0.94	18,500	8,510	8,000	7,999	1.000	F	2,000	511	0.255	A
				PM	0.88		9,990		8,791	1.099	F		1,199	0.599	C
I-280	Bascom to Meridian	SB	4	AM	1.00	18,400	8,464	8,000	8,464	1.058	F	N/A	N/A	N/A	N/A
				PM	1.00		9,936		9,936	1.242	F				
I-280	Meridian to Bascom	NB	4+AUX	AM	1.00	18,400	10,304	9,000	10,304	1.145	F	N/A	N/A	N/A	N/A
				PM	1.00		8,096		8,096	0.900	D				
I-280	Bascom to I-880	NB	4+HOV+AUX	AM	0.88	18,500	10,360	9,000	9,117	1.013	F	2,000	1,243	0.622	C
				PM	0.94		8,140		7,652	0.850	D		488	0.244	A
I-280	I-880 to Winchester	NB	3+HOV	AM	0.88	18,300	10,614	6,000	9,340	1.557	F	2,000	1,274	0.637	C
				PM	0.94		7,686		7,225	1.204	F		461	0.231	A
I-280	Winchester to Saratoga	NB	3+HOV+AUX	AM	0.88	20,200	11,716	7,000	10,310	1.473	F	2,000	1,406	0.703	C
				PM	0.94		8,484		7,975	1.139	F		509	0.255	A
I-280	Saratoga to Lawrence	NB	3+HOV+AUX	AM	0.88	16,000	9,280	7,000	8,166	1.167	F	2,000	1,114	0.557	C
				PM	0.94		6,720		6,317	0.902	D		403	0.202	A
I-880	Bascom to Stevens Creek	SB	3+AUX	AM	1.00	12,200	4,758	7,000	4,758	0.680	C	N/A	N/A	N/A	N/A
				PM	1.00		7,442		7,442	1.063	F				
I-880	Stevens Creek to I-280	SB	3	AM	1.00	12,200	4,758	6,000	4,758	0.793	D	N/A	N/A	N/A	N/A
				PM	1.00		7,442		7,442	1.240	F				
SR 17	I-280 to Hamilton	SB	3+2AUX	AM	1.00	13,700	5,480	8,000	5,480	0.685	C	N/A	N/A	N/A	N/A
				PM	1.00		8,220		8,220	1.028	F				
SR 17	Hamilton to I-280	NB	3+AUX	AM	1.00	13,700	9,316	7,000	9,316	1.331	F	N/A	N/A	N/A	N/A
				PM	1.00		4,384		4,384	0.626	C				
I-880	I-280 to Stevens Creek	NB	3	AM	1.00	12,200	8,174	6,000	8,174	1.362	F	N/A	N/A	N/A	N/A
				PM	1.00		4,026		4,026	0.671	C				
I-880	Stevens Creek to Bascom	NB	3+AUX	AM	1.00	12,200	8,174	7,000	8,174	1.168	F	N/A	N/A	N/A	N/A
				PM	1.00		4,026		4,026	0.575	C				

[a] Mixed-Flow-Vehicles (MFV) = Percent of all vehicles that are in mixed-flow lanes. Source: Caltrans Annual HOVL Report, December 1995.
[b] Capacity of mixed-flow and HOV lanes, assuming 2,000 vphpl.
[c] Traffic volumes in mixed-flow lanes = total volume x MFV fraction.
[d] Traffic volumes in HOV lanes = total volume - mixed-flow volume.

Table 6
Existing Interchange Ramp Levels of Service

Interchange	Ramp	Type	Capacity	Period	Volume	V/C	LOS
I-880/Stevens Creek	SB to WB	Diagonal	2,000	AM	493	0.247	A
			2,000	PM	628	0.314	A
			2,000	Sat	850	0.425	A
I-880/Stevens Creek	SB to EB	Loop	1,800	AM	136	0.076	A
			1,800	PM	168	0.093	A
			1,800	Sat	179	0.099	A
I-880/Stevens Creek	WB to NB	Diagonal	2,000	AM	218	0.109	A
			2,000	PM	179	0.090	A
			2,000	Sat	234	0.117	A
I-880/Stevens Creek	WB to SB	Loop	1,800	AM	160	0.089	A
			1,800	PM	354	0.197	A
			1,800	Sat	270	0.150	A
I-880/Stevens Creek	NB to EB	Diagonal	2,000	AM	272	0.136	A
			2,000	PM	272	0.136	A
			2,000	Sat	501	0.251	A
I-880/Stevens Creek	NB to WB	Loop	1,800	AM	1,004	0.558	A
			1,800	PM	1,051	0.584	A
			1,800	Sat	1,245	0.692	B
I-880/Stevens Creek	EB to SB	Diagonal	2,000	AM	483	0.242	A
			2,000	PM	1,374	0.687	B
			2,000	Sat	1,364	0.682	B
I-880/Stevens Creek	EB to NB	Loop	1,800	AM	252	0.140	A
			1,800	PM	504	0.280	A
			1,800	Sat	750	0.417	A
I-280/Winchester	to NB	Diagonal	2,000	AM	713	0.357	A
			2,000	PM	729	0.365	A
			2,000	Sat	689	0.345	A
I-280/Winchester	from SB	Diagonal	2,000	AM	769	0.385	A
			2,000	PM	1,068	0.534	A
			2,000	Sat	865	0.433	A

3.
Background Conditions

This chapter describes background traffic conditions. Background conditions are defined as conditions just prior to completion of the proposed development. Traffic volumes for background conditions comprise volumes from existing traffic counts plus traffic generated by approved developments in the area. This chapter describes the procedure used to determine background traffic volumes and presents the results of the level of service analysis.

Background Traffic Estimates

The background traffic volumes were estimated by adding existing volumes, growth and Approved Trip Inventory (ATI) volumes (see Appendix C). Specifically, the existing volumes were increased by a growth factor of 0.3 percent per month from the date of the count to September 1997 for any counts over six months old. Traffic from approved but not yet constructed projects included in the city ATI were added to these volumes.

Background Intersection Levels of Service

City of San Jose Analysis

The results of the background conditions analysis using the San Jose method are shown in Table 7. The results show that four of the study intersections would operate at an unacceptable LOS E or worse during at least one of the peak-hours under background conditions. The intersection of Hamilton Avenue and Winchester Boulevard would operate at LOS E in the PM peak-hour. The intersection of Moorpark Avenue and San Tomas Expressway would operate at LOS E in the AM peak-hour and at LOS F in the PM peak-hour. The intersection of San Tomas Expressway and Stevens Creek Boulevard would operate at LOS F in the PM peak-hour. The intersection of Moorpark Avenue and Winchester Boulevard would operate at LOS E in the AM peak-hour. All

Table 7
Background Intersection Levels of Service—SJ Method

Intersection	Peak Hour	V/C	LOS
I-280/Moorpark	AM	0.363	A
	PM	0.457	A
I-880/Stevens Creek	AM	0.254	A
	PM	0.386	A
Bascom/Moorpark	AM	0.804	D
	PM	0.747	C
Bascom/Naglee	AM	0.804	D
	PM	0.646	B
Bascom/San Carlos	AM	0.861	D
	PM	0.827	D
Bellerose/Stevens Creek	AM	0.454	A
	PM	0.628	B
Hamilton/Winchester	AM	0.740	C
	PM	0.913	E
Hedding/Monroe	AM	0.486	A
	PM	0.532	A
Hedding/Winchester	AM	0.536	A
	PM	0.647	B
Monroe/Stevens Creek	AM	0.467	A
	PM	0.819	D
Moorpark/San Tomas	AM	0.914	E
	PM	1.033	F
San Tomas/Stevens Creek	AM	0.826	D
	PM	1.035	F
Moorpark/Winchester	AM	0.909	E
	PM	0.798	C
Saratoga/Stevens Creek	AM	0.606	B
	PM	0.813	D
Stevens Creek/Emporium	AM	0.420	A
	PM	0.519	A
Stevens Creek/Redwood	AM	0.396	A
	PM	0.546	A
Stevens Creek/Winchester	AM	0.651	B
	PM	0.860	D
Tisch/Winchester	AM	0.414	A
	PM	0.718	C
Williams/Winchester	AM	0.752	C
	PM	0.502	A
Winchester/Oisen	AM	0.428	A
	PM	0.480	A
Winchester/Olin	AM	0.431	A
	PM	0.444	A

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other study intersections would operate at an acceptable LOS D or better in both of the peak-hours under background conditions. The intersection level of service calculation sheets for the San Jose method are included in Appendix D.

CMP Analysis

The results of the background conditions analysis using the CMP method are shown in Table 8. The results show that all of the CMP study intersections would operate at an acceptable LOS E or better during both peak-hours under background conditions. The intersection level of service calculation sheets for the CMP method are included in Appendix E.

Table 8

Background Intersection Levels of Service—CMP Method

Intersection	Peak Hour	Average Intersection Delay[a]	LOS
I-280/Moorpark	AM	16	C
	PM	17	C
I-880/Stevens Creek	AM	16	C
	PM	17	C
San Tomas/Stevens Creek	AM	37	D
	PM	54	E
San Tomas/Moorpark	AM	37	D
	PM	37	D
Saratoga/Stevens Creek	AM	32	D
	PM	36	D
Stevens Creek/Winchester	AM	29	D
	PM	40	D

[a] Whole intersection average delay expressed in seconds per vehicle.

Background Freeway Analysis

The Center for Urban Analysis (CUA) traffic model, which is the Santa Clara County traffic model sanctioned by the CMP, was used to produce forecasts of future background traffic. The model forecasts of background traffic include as a component the existing volume of traffic on the freeways. The forecasts are, however, independent of the existing traffic "counts" on which the existing freeway analysis is based. The background freeway analysis is therefore free from the inaccuracies inherent in the existing freeway analysis. The freeway traffic volumes are included in Appendix F.

As described previously, the assumed freeway capacity is 2,000 vehicles per hour per lane (vphpl), as prescribed by the CMP. The results of the background freeway analysis are summarized in Table 9. The results show that on 9 of the 16 freeway segments the mixed-flow lanes would operate at an unacceptable LOS F during at least one of the peak hours under background conditions.

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Background Interchange Ramp Analysis

Ramp volumes under background conditions were estimated by adding trips from approved projects to existing ramp volumes. The ramp volumes are included in Appendix G. The results of the ramp analysis are summarized in Table 10. The results show that all ten freeway ramps analyzed would operate at an acceptable LOS D or better during all peak hours.

Table 9
Background Freeway Segment Levels of Service

				Background Traffic Volumes (a)							
				Mixed-Flow Lane Traffic Volumes				HOV Lane Traffic Volumes			
Freeway	Segment	Direction	Peak Hour	Capacity	Volume	V/C	LOS	Capacity	Volume	V/C	LOS
I-280	Lawrence to Saratoga	SB	AM	7,000	6,957	0.99	E	2,000	457	0.23	A
			PM		7,421	1.06	F		770	0.39	B
I-280	Saratoga to Winchester	SB	AM	7,000	7,156	1.02	F	2,000	396	0.20	A
			PM		7,252	1.04	F		638	0.32	A
I-280	Winchester to I-880	SB	AM	6,000	4,251	0.71	C	2,000	336	0.17	A
			PM		4,284	0.71	C		564	0.28	A
I-280	I-880 to Bascom	SB	AM	8,000	6,877	0.86	D	2,000	476	0.24	A
			PM		7,166	0.90	D		663	0.33	A
I-280	Bascom to Meridian	SB	AM	8,000	7,356	0.92	D	N/A	0	N/A	N/A
			PM		7,829	0.98	E		0	N/A	N/A
I-280	Meridian to Bascom	NB	AM	9,000	7,713	0.86	D	N/A	0	N/A	N/A
			PM		7,270	0.81	D		0	N/A	N/A
I-280	Bascom to I-880	NB	AM	9,000	8,435	0.94	E	2,000	439	0.22	A
			PM		7,894	0.88	D		506	0.25	A
I-280	I-880 to Winchester	NB	AM	6,000	5,572	0.93	D	2,000	465	0.23	A
			PM		5,059	0.84	D		580	0.29	A
I-280	Winchester to Saratoga	NB	AM	7,000	7,531	1.08	F	2,000	488	0.24	A
			PM		7,206	1.03	F		518	0.26	A
I-280	Saratoga to Lawrence	NB	AM	7,000	7,040	1.01	F	2,000	465	0.23	A
			PM		6,717	0.96	E		500	0.25	A
I-880	Bascom to Stevens Creek	SB	AM	7,000	4,970	0.71	C	N/A	N/A	N/A	N/A
			PM		7,576	1.08	F		N/A	N/A	N/A
I-880	Stevens Creek to I-280	SB	AM	6,000	3,449	0.57	C	N/A	N/A	N/A	N/A
			PM		6,109	1.02	F		N/A	N/A	N/A
SR 17	I-280 to Hamilton	SB	AM	8,000	5,233	0.65	C	N/A	N/A	N/A	N/A
			PM		8,508	1.06	F		N/A	N/A	N/A
SR 17	Hamilton to I-280	NB	AM	7,000	7,520	1.07	F	N/A	N/A	N/A	N/A
			PM		5,330	0.76	C		N/A	N/A	N/A
I-880	I-280 to Stevens Creek	NB	AM	6,000	5,997	1.00	F	N/A	N/A	N/A	N/A
			PM		3,626	0.60	C		N/A	N/A	N/A
I-880	Stevens Creek to Bascom	NB	AM	7,000	6,888	0.98	E	N/A	N/A	N/A	N/A
			PM		5,095	0.73	C		N/A	N/A	N/A

[a] Background traffic volumes and HOVL proportions are based on 2010 CUA model projections.

Table 10
Background Interchange Ramp Levels of Service

Interchange	Ramp	Type	Capacity	Period	Volume	V/C	LOS
I-880/Stevens Creek	SB to WB	Diagonal	2,000	AM	639	0.320	A
			2,000	PM	682	0.341	A
			2,000	Sat	904	0.452	A
I-880/Stevens Creek	SB to EB	Loop	1,800	AM	136	0.076	A
			1,800	PM	168	0.093	A
			1,800	Sat	179	0.099	A
I-880/Stevens Creek	WB to NB	Diagonal	2,000	AM	218	0.109	A
			2,000	PM	179	0.090	A
			2,000	Sat	234	0.117	A
I-880/Stevens Creek	WB to SB	Loop	1,800	AM	160	0.089	A
			1,800	PM	354	0.197	A
			1,800	Sat	270	0.150	A
I-880/Stevens Creek	NB to EB	Diagonal	2,000	AM	272	0.136	A
			2,000	PM	272	0.136	A
			2,000	Sat	501	0.251	A
I-880/Stevens Creek	NB to WB	Loop	1,800	AM	1,101	0.612	B
			1,800	PM	1,144	0.636	B
			1,800	Sat	1,338	0.743	C
I-880/Stevens Creek	EB to SB	Diagonal	2,000	AM	527	0.264	A
			2,000	PM	1,513	0.757	C
			2,000	Sat	1,503	0.752	C
I-880/Stevens Creek	EB to NB	Loop	1,800	AM	318	0.177	A
			1,800	PM	531	0.295	A
			1,800	Sat	777	0.432	A
I-280/Winchester	to NB	Diagonal	2,000	AM	757	0.379	A
			2,000	PM	768	0.384	A
			2,000	Sat	728	0.364	A
I-280/Winchester	from SB	Diagonal	2,000	AM	785	0.393	A
			2,000	PM	1,080	0.540	A
			2,000	Sat	877	0.439	A

4.
Project Conditions

This chapter describes traffic conditions with the project. It begins with a description of the method used to estimate the amount of traffic added to the roadway system by the project, and concludes with a summary of the intersection level of service results. Project conditions are defined as the background conditions plus additional traffic generated by the project development.

Project Traffic Estimates

The amount of traffic associated with a project is estimated using a three-step process: (1) trip generation, (2) trip distribution, and (3) trip assignment. In project trip generation, the amount of traffic entering and exiting the site is estimated on both a daily and a peak-hour basis. As part of the project trip distribution, an estimation is made of the directions the project trips would use to approach and depart the site. In the project trip assignment, the trips are assigned to specific streets and intersections. These procedures are described further in the following sections.

Trip Generation

The amount of traffic added to the roadway network by a particular development is estimated by applying the applicable (based on type of land use) trip generation rates to the size of the development. The standard trip generation rates are those published in the Institute of Transportation Engineers (ITE), *Trip Generation*, fifth edition.

Trip generation for retail uses are typically adjusted to account for pass-by trips. Pass-by trips are trips that would already be on the adjacent roadways (and are therefore already counted in the background traffic) but would turn into the site while passing by. Justification for applying the pass-by trip reduction is founded on the observation that such retail traffic is not actually generated by the retail development, but is already part of the ambient traffic levels. Pass-by trips are therefore excluded from the traffic projections. A pass-by trip reduction of 32 percent was applied to the existing retail uses and a pass-by trip reduction of 25 percent was applied to the proposed retail uses (note that the reduction decreases with increasing size of the retail use). The trip generation for the proposed retail and residential uses was further reduced by 10 percent to reflect an internalization of trips within the site.

With the trip generation rates and reductions applied to the proposed development as indicated, the project as proposed is estimated to generate a total of 14,520 daily trips with 728 trips occurring during the AM peak-hour (269 inbound and 459 outbound) and 1,133 trips occurring during the PM peak-hour (647 inbound and 486 outbound). The trip generation estimates are presented in Table 11.

Trip Distribution

The trip distribution pattern was estimated based on existing travel patterns on the surrounding roadways and the relative locations of complementary land uses. The actual distribution used in this analysis is based on a previous study by the City of San Jose entitled *Stevens Creek/Winchester Area Traffic Study*, August 1993. A separate distribution was used for the separate project land uses, as follows:

Shopping Center

1% to and from the south on Winchester Boulevard
7% to and from the north on Winchester Boulevard
2% to and from the west on Payne Avenue
1% to and from the east on Payne Avenue
2% to and from the west on Williams Road
2% to and from the east on Williams Road
3% to and from the south on San Tomas Expressway
7% to and from the north on San Tomas Expressway
6% to and from the west on Stevens Creek Boulevard
4% to and from the east on Stevens Creek Boulevard
1% to and from the west on Dorcich Way
5% to and from the north on Monroe Street
2% to and from the north on Bascom Avenue
3% to and from the south on Bascom Avenue
3% to and from the east on Hedding Street
7% to and from the east on Naglee Avenue
1% to and from the west on Moorpark Avenue
8% to and from the west on I-280
15% to and from the east on I-280
8% to and from the south on I-880
12% to and from the north on I-880

Residential Hotel

25%	to and from the west on I-280
15%	to and from the east on I-280
5%	to and from the south on I-880
40%	to and from the north on I-880
5%	to and from the west on Stevens Creek Boulevard
10%	to and from the north on San Tomas Expressway

The trip distribution pattern is shown graphically on Figure 5.

Table 11

Trip Generation Estimates for Town & Country Redevelopment

				AM Peak Hour[a]						PM Peak Hour[a]					
Project Description	Size (1,000 s.f.)	Daily Rate	Daily Trips	Peak-Hour Rate	Capture Reduction	Pass-By Reduction	In	Out	Total	Peak-Hour Rate	Capture Reduction	Pass-By Reduction	In	Out	Total
Shopping Center (Proposed)	600	36.4	19,656	0.78	10%	0%	265	156	421	3.4	10%	25%	663	663	1,326
Less Shopping Center (Existing)	285	48	13,680	1.06	0%	0%	190	112	302	4.51	0%	32%	437	437	874
Added Trips From Shopping Center			5,976				75	44	119				226	226	452
Residential Dwelling Units	1200	6.3	6,804	0.44	10%	0%	114	361	475	0.49	10%	0%	339	191	529
Limited-Service Hotel	200	8.7	1,740	0.67	0%	0%	80	54	134	0.76	0%	0%	82	70	152
Net Added Trips			14,520				269	459	728				647	486	1,133

[a] Peak-hour and daily trip generation totals reflect reductions for internal capture, in addition peak-hour trips reflectreductions for pass-by trips.
Source: Rates per 1,000 s.f. or per d.u., from ITE *Trip Generation*, 5th Edition, 1991.

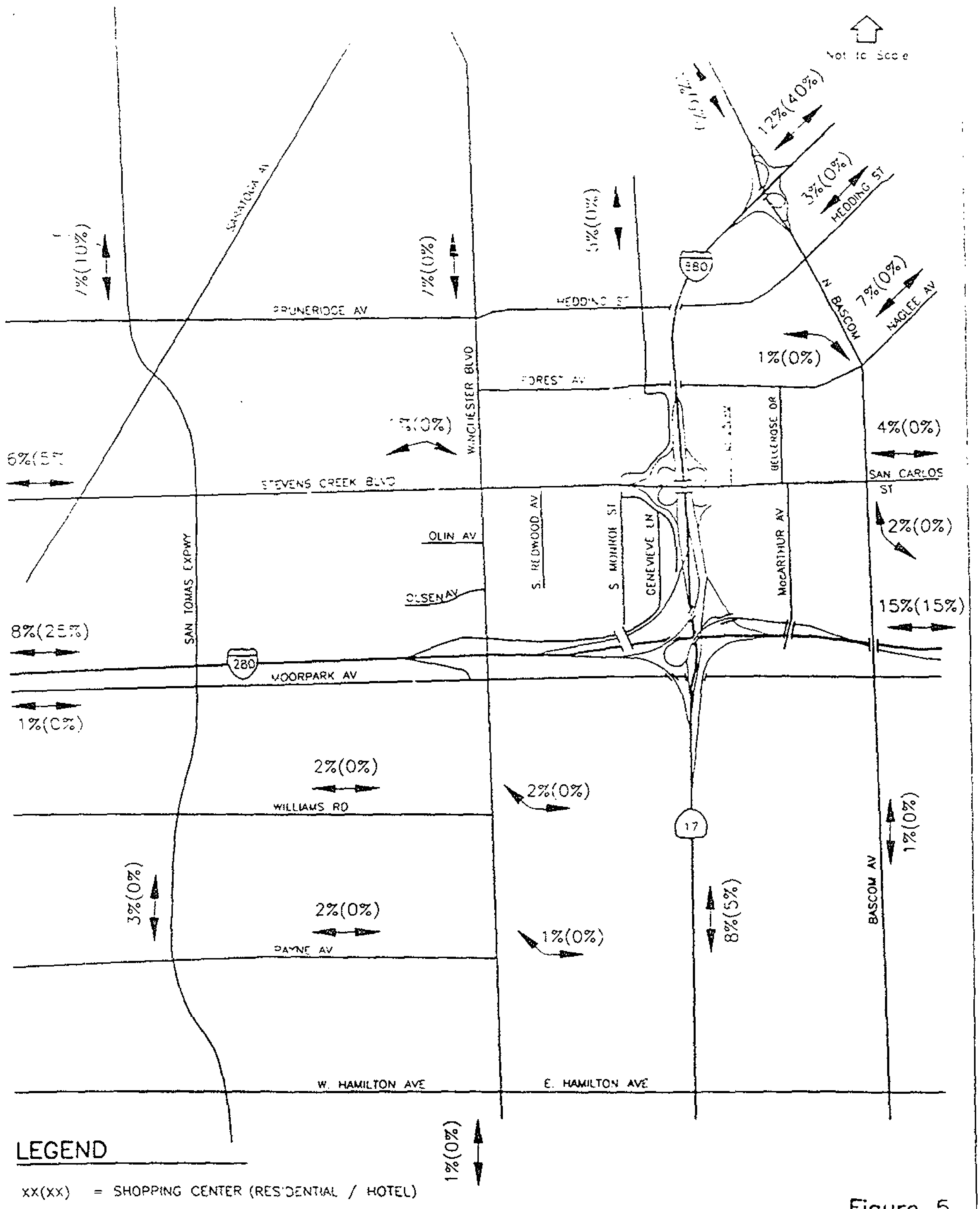

Figure 5

TRIP DISTRIBUTION

Trip Assignment

The trips generated by the proposed development were assigned to the roadway system based on the trip distribution discussed above. Figure 6 presents the trip assignments at the 21 study intersections.

Project Land Use Alternative

In addition to the proposed project land uses described previously, an alternative project land use has been considered. The proposed project land uses include replacement of the existing 285,000 s.f. of retail with 600,000 s.f. of retail, 1,200 units of residential, and two 100-room hotels. The alternative land use would consist of the very same land use changes with, in addition, the conversion of the adjacent auto dealership to 50,000 s.f. of retail use. The dealership is located on the southeast corner of the intersection of Winchester Boulevard and Stevens Creek Boulevard immediately adjacent to the Town & Country site.

A separate analysis of the alternative project land use is not needed because the alternative project land use would create no additional traffic impacts than the proposed project land use. The reasons for this are as follows. First, the trip distribution and the trip assignment for the retail use and the dealership would be the same, because for each of these uses the trips are of the same type, namely home-based shopping. Second, the 50,000 s.f. of retail would generate fewer peak-hour trips than the existing auto dealership. This fact has been established by conducting actual traffic counts during the weekday AM, weekday PM, and Saturday peak hours at the driveways of the dealership, and comparing these counts to the estimated trip generation for an additional 50,000 s.f. of retail. These comparisons are detailed in Appendix I.

In summary, the same trip distribution is applicable to both the proposed project land use and the alternative project land use. The alternative project land use would generate fewer total trips than the proposed project land use. At all study intersections the alternative land use would contribute the same or fewer trips than the project land use. Therefore, the alternative project land use would create no additional traffic impacts than the proposed project land use.

Project Intersection Levels of Service

City of San Jose Analysis

The results of the project conditions analysis using the San Jose method are shown in Table 12. The results show that five of the study intersections would operate at an unacceptable LOS E or worse during at least one of the peak-hours under project conditions. The intersection of Hamilton Avenue and Winchester Boulevard would operate at LOS E in the PM peak hour. The intersection of Moorpark Avenue and San Tomas Expressway would operate at LOS E in the AM peak-hour and at LOS F in the PM peak-hour. The intersection of San Tomas Expressway and Stevens Creek Boulevard would operate at LOS F in the PM peak-hour. The intersection of Moorpark Avenue and Winchester Boulevard would operate at LOS E in the AM peak-hour. The intersection of Stevens Creek Boulevard and Winchester Boulevard would operate at LOS E in the PM peak hour. All other study intersections would operate at an acceptable LOS D or better in both of the peak-hours under project conditions. The intersection level of service calculation sheets for the San Jose method are included in Appendix D.

CMP Analysis

The results of the project conditions analysis using the CMP method are shown in Table 13. The results show that all of the CMP study intersections would operate at an acceptable LOS E or better during both peak-hours under project conditions. The intersection level of service calculation sheets for the CMP method are included in Appendix E.

Project Freeway Analysis

Project traffic conditions were analyzed for the 16 previously identified freeway segments. Project traffic volumes were estimated by adding to the base model forecasts the estimated freeway trips from the Town & Country redevelopment project. The freeway traffic volumes are included in Appendix F.

As described previously, the assumed freeway capacity is 2,000 vehicles per hour per lane (vphpl), as prescribed by the CMP. The results of the project freeway analysis are summarized in Table 14. The results show that on 10 of the 16 freeway segments the mixed-flow lanes would operate at an unacceptable LOS F during at least one of the peak hours under project conditions. The results also show that on 6 of these 10 study segments the volume of project traffic would constitute at least one percent of freeway capacity.

Project Interchange Ramp Analysis

Ramp volumes under project conditions were estimated by adding trips from the Town & Country redevelopment project to background ramp volumes. The ramp volumes are included in Appendix G. The results of the ramp analysis are summarized in Table 15. The results show that all ten freeway ramps analyzed would operate at an acceptable LOS D or better during all peak hours.

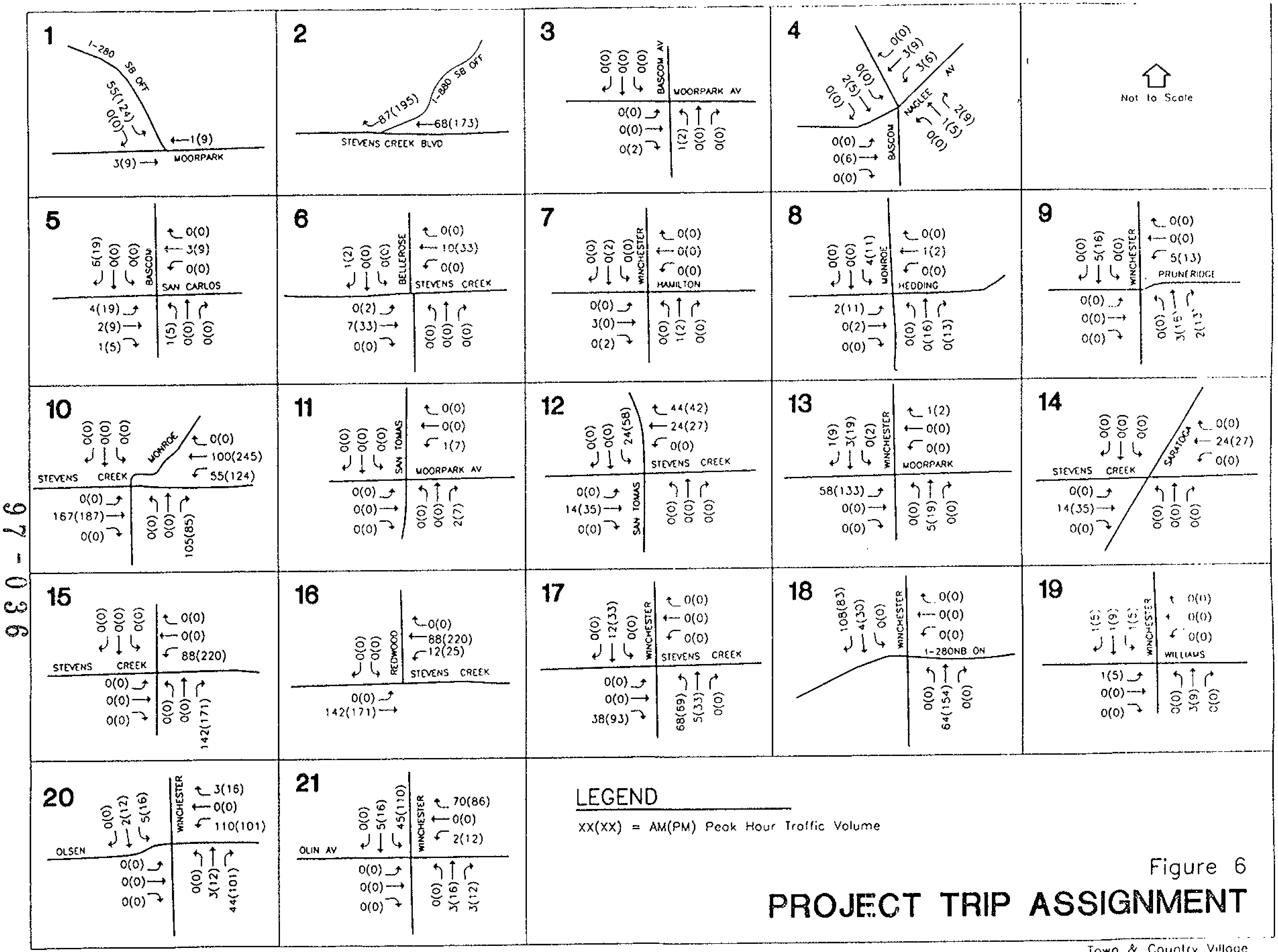

Figure 6

PROJECT TRIP ASSIGNMENT

Barton-Aschman Associates, Inc.

Town & Country Village

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Table 12
Project Intersection Levels of Service—SJ Method

Intersection	Peak Hour	Background		Project Conditions		
		V/C	LOS	V/C	LOS	% INC.
I-280/Moorpark	AM	0.363	A	0.379	A	4.52
	PM	0.457	A	0.493	A	8.26
I-880/Stevens Creek	AM	0.254	A	0.269	A	5.91
	PM	0.386	A	0.421	A	9.00
Bascom/Moorpark	AM	0.804	D	0.804	D	0.11
	PM	0.747	C	0.747	C	0.00
Bascom/Naglee	AM	0.804	D	0.803	D	0.17
	PM	0.646	B	0.654	B	1.12
Bascom/San Carlos	AM	0.861	D	0.865	D	0.28
	PM	0.827	D	0.835	D	0.72
Bellerose/Stevens Creek	AM	0.454	A	0.457	A	1.00
	PM	0.628	B	0.641	B	2.29
Hamilton/Winchester	AM	0.740	C	0.740	C	0.04
	PM	0.913	E	0.913	E	0.06
Hedding/Monroe	AM	0.486	A	0.487	A	0.24
	PM	0.532	A	0.545	A	2.24
Hedding/Winchester	AM	0.536	A	0.540	A	0.53
	PM	0.647	B	0.660	B	1.69
Monroe/Stevens Creek	AM	0.467	A	0.528	A	14.44
	PM	0.819	D	0.899	D	10.76
Moorpark/San Tomas	AM	0.914	E	0.914	E	0.00
	PM	1.033	F	1.036	F	0.22
San Tomas/Stevens Creek	AM	0.831	D	0.842	D	1.31
	PM	1.035	F	1.040	F	0.98
Moorpark/Winchester	AM	0.909	E	**0.924**	**E**	**1.68**
	PM	0.798	C	0.832	D	4.63
Saratoga/Stevens Creek	AM	0.606	B	0.613	B	1.23
	PM	0.813	D	0.822	D	1.48
Stevens Creek/Emporium	AM	0.420	A	0.420	A	0.00
	PM	0.519	A	0.589	A	11.78
Stevens Creek/Redwood	AM	0.396	A	0.416	A	5.39
	PM	0.546	A	0.596	A	9.37
Stevens Creek/Winchester	AM	0.651	B	0.654	B	0.25
	PM	0.860	D	**0.915**	**E**	**3.41**
Tisch/Winchester	AM	0.414	A	0.447	A	9.14
	PM	0.718	C	0.745	C	4.60
Williams/Winchester	AM	0.752	C	0.754	C	0.26
	PM	0.502	A	0.507	A	0.84
Winchester/Olsen	AM	0.428	A	0.490	A	11.23
	PM	0.480	A	0.529	A	6.67
Winchester/Olin	AM	0.431	A	0.451	A	3.42
	PM	0.444	A	0.435	A	0.00

*Note: Significant impacts indicated in **bold**.

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Table 13
Project Intersection Levels of Service—CMP Method

		Background		Project Conditions		
Intersection	Peak Hour	Average Intersection Delay[a]	LOS	Average Intersection Delay[a]	LOS	Increase in Critical Movement[b]
I-280/Moorpark	AM	16	C	16	C	0
	PM	17	C	17	C	0
I-880/Stevens Creek	AM	16	C	17	C	1
	PM	17	C	19	C	2
San Tomas/Stevens Creek	AM	37	D	38	D	1
	PM	54	E	55	E	2
San Tomas/Moorpark	AM	37	D	37	D	0
	PM	37	D	37	D	0
Saratoga/Stevens Creek	AM	32	D	32	D	0
	PM	36	D	36	D	0
Stevens Creek/Winchester	AM	29	D	29	D	0
	PM	40	D	41	E	8

[a] Whole intersection average delay expressed in seconds per vehicle.
[b] Increase in critical movement delay.

Table 14
Project Freeway Segment Levels of Service

			Background With Project¹								Town & Country Project Traffic				
			Mixed-Flow Lane Traffic Volumes				HOV Lane Traffic Volumes					Mixed-Flow Lane		HOV Lane	
Segment	Direction	Peak Hour	Capacity	Volume	V/C	LOS	Capacity	Volume	V/C	LOS	Total Volume	Volume	% Capacity	Volume	% Capacity
Lawrence to Saratoga	SB	AM	7,000	7,009	1.00	F	2,000	460	0.23	A	55	52	0.7%	3	0.0%
		PM		7,533	1.08	F		782	0.39	B	124	112	1.6%	12	0.0%
Saratoga to Winchester	SB	AM	7,000	7,208	1.03	F	2,000	399	0.20	A	55	52	0.7%	3	0.0%
		PM		7,366	1.05	F		648	0.32	A	124	114	1.6%	10	0.0%
Winchester to I-880	SB	AM	6,000	4,251	0.71	C	2,000	336	0.17	A	0	0	0.0%	0	0.0
		PM		4,284	0.71	C		564	0.28	A	0	0	0.0%	0	0.0
I-880 to Bascom	SB	AM	8,000	6,942	0.87	D	2,000	480	0.24	A	69	65	0.8%	4	0.0
		PM		7,233	0.90	D		669	0.33	A	73	67	0.8%	6	0.0%
Bascom to Meridian	SB	AM	8,000	7,425	0.93	D	N/A	0	N/A	N/A	69	69	0.9%	N/A	N/A
		PM		7,902	0.99	E		0	N/A	N/A	73	73	0.9%	N/A	N/A
Meridian to Bascom	NB	AM	9,000	7,753	0.86	D	N/A	0	N/A	N/A	40	40	0.4%	N/A	N/A
		PM		7,367	0.82	D		0	N/A	N/A	97	97	1.1%	N/A	N/A
Bascom to I-880	NB	AM	9,000	8,473	0.94	E	2,000	441	0.22	A	40	38	0.4%	2	0.0%
		PM		7,985	0.89	D		512	0.26	A	97	91	1.0%	6	0.0%
I-880 to Winchester	NB	AM	6,000	5,572	0.93	D	2,000	465	0.23	A	0	0	0.0%	0	0.0%
		PM		5,059	0.84	D		580	0.29	A	0	0	0.0%	0	0.0%
Winchester to Saratoga	NB	AM	7,000	7,632	1.09	F	2,000	495	0.25	A	108	101	1.4%	7	0.0%
		PM		7,283	1.04	F		524	0.26	A	83	77	1.1%	6	0.0%
Saratoga to Lawrence	NB	AM	7,000	7,141	1.02	F	2,000	472	0.24	A	108	101	1.4%	7	0.0%
		PM		6,794	0.97	E		506	0.25	A	83	77	1.1%	6	0.0%
Bascom to Stevens Creek	SB	AM	7,000	5,057	0.72	C	N/A	N/A	N/A	N/A	87	87	1.2%	N/A	N/A
		PM		7,672	1.10	F		N/A	N/A	N/A	96	96	1.4%	N/A	N/A
Stevens Creek to I-280	SB	AM	6,000	3,474	0.58	C	N/A	N/A	N/A	N/A	25	25	0.4%	N/A	N/A
		PM		6,140	1.02	F		N/A	N/A	N/A	31	31	0.5%	N/A	N/A
I-280 to Hamilton	SB	AM	8,000	5,258	0.66	C	N/A	N/A	N/A	N/A	25	25	0.3%	N/A	N/A
		PM		8,539	1.07	F		N/A	N/A	N/A	31	31	0.4%	N/A	N/A
Hamilton to I-280	NB	AM	7,000	7,536	1.08	F	N/A	N/A	N/A	N/A	16	16	0.2%	N/A	N/A
		PM		5,369	0.77	C		N/A	N/A	N/A	39	39	0.6%	N/A	N/A
I-280 to Stevens Creek	NB	AM	6,000	6,013	1.00	F	N/A	N/A	N/A	N/A	16	16	0.3%	N/A	N/A
		PM		3,665	0.61	C	N/A	N/A	N/A	N/A	39	39	0.7%	N/A	N/A
Stevens Creek to Bascom	NB	AM	7,000	7,059	1.01	F		N/A	N/A	N/A	171	171	2.4%	N/A	N/A
		PM		5,226	0.75	C	N/A	N/A	N/A	N/A	131	131	1.9%	N/A	N/A

¹ Background traffic volumes and HOVL proportions are based on 2010 CUA model projections.

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Table 15
Project Interchange Ramp Levels of Service

					Background Conditions			Project Conditions		
Interchange	Ramp	Type	Capacity	Period	Volume	V/C	LOS	Volume	V/C	LOS
I-880/Stevens Creek	SB to WB	Diagonal	2,000	AM	639	0.320	A	726	0.363	A
			2,000	PM	682	0.341	A	878	0.439	A
			2,000	Sat	904	0.452	A	1,100	0.550	A
I-880/Stevens Creek	SB to EB	Loop	1,800	AM	136	0.076	A	136	0.076	A
			1,800	PM	168	0.093	A	168	0.093	A
			1,800	Sat	179	0.099	A	179	0.099	A
I-880/Stevens Creek	WB to NB	Diagonal	2,000	AM	218	0.109	A	218	0.109	A
			2,000	PM	179	0.090	A	179	0.090	A
			2,000	Sat	234	0.117	A	234	0.117	A
I-880/Stevens Creek	WB to SB	Loop	1,800	AM	160	0.089	A	160	0.089	A
			1,800	PM	354	0.197	A	354	0.197	A
			1,800	Sat	270	0.150	A	270	0.150	A
I-880/Stevens Creek	NB to EB	Diagonal	2,000	AM	272	0.136	A	272	0.136	A
			2,000	PM	272	0.136	A	272	0.136	A
			2,000	Sat	501	0.251	A	501	0.251	A
I-880/Stevens Creek	NB to WB	Loop	1,800	AM	1,101	0.612	B	1,157	0.643	B
			1,800	PM	1,144	0.636	B	1,280	0.711	C
			1,800	Sat	1,338	0.743	C	1,474	0.819	D
I-880/Stevens Creek	EB to SB	Diagonal	2,000	AM	527	0.264	A	621	0.311	A
			2,000	PM	1,513	0.757	C	1,617	0.809	D
			2,000	Sat	1,503	0.752	C	1,607	0.804	D
I-880/Stevens Creek	EB to NB	Loop	1,800	AM	318	0.177	A	489	0.272	A
			1,800	PM	531	0.295	A	662	0.368	A
			1,800	Sat	777	0.432	A	908	0.504	A
I-280/Winchester	to NB	Diagonal	2,000	AM	757	0.379	A	865	0.433	A
			2,000	PM	768	0.384	A	851	0.426	A
			2,000	Sat	728	0.364	A	811	0.406	A
I-280/Winchester	from SB	Diagonal	2,000	AM	785	0.393	A	840	0.420	A
			2,000	PM	1,080	0.540	A	1,204	0.602	B
			2,000	Sat	877	0.439	A	1,001	0.501	A

5.
Cumulative Conditions

In conformance with the California Environmental Quality Act, an analysis was conducted of traffic impacts of all potential future developments. This chapter presents an analysis of cumulative conditions with the project.

Cumulative Conditions

Cumulative conditions consist of background traffic volumes plus projected traffic volumes for the project, plus proposed Valley Fair Mall expansion. The Valley Fair Mall expansion consists of the addition of 261,000 s.f. of retail space to the existing (1,077,000 s.f.) mall. Trip generation and assignment for the Valley Fair Mall expansion was performed by Barton-Aschman. The projected traffic volumes for the Valley Fair Mall expansion are presented in Appendix A.

City of San Jose Analysis

The analysis results for cumulative conditions using the San Jose method are shown in Table 16. The results show that 6 of the study intersections would operate at an unacceptable LOS E or worse during at least one of the peak hours under cumulative conditions. The intersection of Hamilton Avenue and Winchester Boulevard would operate at LOS E in the PM peak hour. The intersection of Monroe Street and Stevens Creek Boulevard would operate at LOS E in the PM peak hour. The intersection of Moorpark Avenue and San Tomas Expressway would operate at LOS E in the AM peak hour and at LOS F in the PM peak hour. The intersection of San Tomas Expressway and Stevens Creek Boulevard would operate at LOS F in the PM peak hour. The intersection of Moorpark Avenue and Winchester Boulevard would operate at LOS E in the AM peak hour. The intersection of Stevens Creek Boulevard and Winchester Boulevard would operate at LOS E in the PM peak hour. All other study intersections would operate at an acceptable LOS D or better in both of the peak hours under cumulative conditions. The intersection level of service calculation sheets for the San Jose method are included in Appendix D.

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Table 16
Cumulative Intersection Levels of Service—SJ Method

		Background		Cumulative		
Intersection	Peak Hour	V/C	LOS	V/C	LOS	% Incr.[1]
I-280/Moorpark	AM	0.363	A	0.380	A	4.52
	PM	0.457	A	0.498	A	8.26
I-880/Stevens Creek	AM	0.254	A	0.273	A	5.91
	PM	0.386	A	0.434	A	9.00
Bascom/Moorpark	AM	0.804	D	0.805	D	0.11
	PM	0.747	C	0.747	C	0.00
Bascom/Naglee	AM	0.804	D	0.805	D	0.17
	PM	0.646	B	0.659	B	1.12
Bascom/San Carlos	AM	0.861	D	0.867	D	0.28
	PM	0.827	D	0.843	D	0.72
Bellerose/Stevens Creek	AM	0.454	A	0.459	A	1.00
	PM	0.628	B	0.646	B	2.29
Hamilton/Winchester	AM	0.740	C	0.742	C	0.04
	PM	0.913	E	0.914	E	0.06
Hedding/Monroe	AM	0.486	A	0.488	A	0.24
	PM	0.532	A	0.550	A	2.24
Hedding/Winchester	AM	0.536	A	0.541	A	0.53
	PM	0.647	B	0.669	B	1.69
Monroe/Stevens Creek	AM	0.467	A	0.533	A	14.44
	PM	0.819	D	**0.924**	**E**	10.76
Moorpark/San Tomas	AM	0.914	E	0.915	E	0.00
	PM	1.033	F	1.040	F	0.22
San Tomas/Stevens Creek	AM	0.826	D	0.838	D	1.31
	PM	1.035	F	1.046	F	0.98
Moorpark/Winchester	AM	0.909	E	0.928	E	**1.68**
	PM	0.798	C	0.839	D	4.63
Saratoga/Stevens Creek	AM	0.606	B	0.613	B	1.23
	PM	0.813	D	0.826	D	1.48
Stevens Creek/Emporium	AM	0.420	A	0.423	A	0.00
	PM	0.519	A	0.602	B	11.78
Stevens Creek/Redwood	AM	0.396	A	0.422	A	5.39
	PM	0.546	A	0.609	B	9.37
Stevens Creek/Winchester	AM	0.651	B	0.659	B	0.25
	PM	0.860	D	**0.939**	**E**	**3.41**
Tisch/Winchester	AM	0.414	A	0.449	A	9.14
	PM	0.718	C	0.755	C	4.60
Williams/Winchester	AM	0.752	C	0.757	C	0.26
	PM	0.502	A	0.511	A	0.84
Winchester/Olsen	AM	0.424	A	0.493	A	11.23
	PM	0.476	A	0.534	A	6.67
Winchester/Olin	AM	0.427	A	0.454	A	3.42
	PM	0.440	A	0.442	A	0.00

[*] Note: Significant impacts indicated in **bold.**

[1] Percent increase attributed to Town & Country Project

CMP Analysis

The analysis results for cumulative conditions using the CMP method are shown in Table 17. The results show that all of the CMP study intersections would operate at an acceptable LOS E or better during both peak hours under cumulative conditions. The intersection level of service calculation sheets for the CMP method are included in Appendix E.

Table 17
Cumulative Intersection Levels of Service—CMP Method

Intersection	Peak Hour	Average Intersection Delay[a]	LOS
I-280/Moorpark	AM	16	C
	PM	17	C
I-880/Stevens Creek	AM	17	C
	PM	20	C
San Tomas/Stevens Creek	AM	38	D
	PM	56	E
San Tomas/Moorpark	AM	37	D
	PM	37	D
Saratoga/Stevens Creek	AM	32	D
	PM	36	D
Stevens Creek/Winchester	AM	29	D
	PM	42	E

[a] Whole intersection average delay expressed in seconds per vehicle.

Cumulative Freeway Analysis

Cumulative traffic conditions were analyzed for the 16 previously identified freeway segments. Cumulative traffic volumes were estimated by adding to the base model forecasts the estimated freeway trips from the Town & Country redevelopment, and from the proposed Valley Fair expansion project. The freeway traffic volumes are included in Appendix F.

The results of the cumulative freeway analysis are summarized in Table 18. The results show that on 10 of the 16 freeway segments the mixed-flow lanes would operate at an unacceptable LOS F during at least one of the peak hours under cumulative conditions.

Table 18

Cumulative Freeway Segment Levels of Service

				Cumulative With Project*								Town & Country Project Traffic				
				Mixed-Flow Lane Traffic Volumes				HOV Lane Traffic Volumes					Mixed-Flow Lane		HOV Lane	
Freeway	Segment	Direction	Peak Hour	Capacity	Volume	V/C	LOS	Capacity	Volume	V/C	LOS	Total Volume	Volume	% Capacity	Volume	% Capacity
I-280	Lawrence to Saratoga	SB	AM	7,000	7,013	1.00	F	2,000	461	0.23	A	55	52	0.7%	3	0.7%
			PM		7,550	1.08	F		783	0.39	B	124	**112**	**1.5%**	12	1.5%
I-280	Saratoga to Winchester	SB	AM	7,000	7,213	1.03	F	2,000	399	0.20	A	55	52	0.7%	3	0.8%
			PM		7,383	1.05	F		649	0.32	A	124	**114**	**1.5%**	10	1.5%
I-280	Winchester to I-880	SB	AM	6,000	4,251	0.71	C	2,000	336	0.17	A	0	0	0.0%	0	0.0%
			PM		4,284	0.71	C		564	0.28	A	0	0	0.0%	0	0.0%
I-280	I-880 to Bascom	SB	AM	8,000	6,946	0.87	D	2,000	481	0.24	A	69	65	0.9%	4	0.8%
			PM		7,262	0.91	D		672	0.34	A	73	67	0.9%	6	0.9%
I-280	Bascom to Meridian	SB	AM	8,000	7,430	0.93	D	N/A	N/A	N/A	N/A	69	69	0.9%	N/A	N/A
			PM		7,934	0.99	E		N/A	N/A	N/A	73	73	0.9%	N/A	N/A
I-280	Meridian to Bascom	NB	AM	9,000	7,762	0.86	D	N/A	N/A	N/A	N/A	40	40	0.5%	N/A	N/A
			PM		7,399	0.82	D		N/A	N/A	N/A	97	97	1.3%	N/A	N/A
I-280	Bascom to I-880	NB	AM	9,000	8,482	0.94	E	2,000	441	0.22	A	40	38	0.4%	2	0.4%
			PM		8,015	0.89	D		514	0.26	A	97	91	1.1%	6	1.2%
I-280	I-880 to Winchester	NB	AM	6,000	5,572	0.93	D	2,000	465	0.23	A	0	0	0.0%	0	0.0%
			PM		5,059	0.84	D		580	0.29	A	0	0	0.0%	0	0.0%
I-280	Winchester to Saratoga	NB	AM	7,000	7,635	1.09	F	2,000	495	0.25	A	108	**101**	**1.3%**	7	1.4%
			PM		7,300	1.04	F		525	0.26	A	83	**77**	**1.1%**	6	1.1%
I-280	Saratoga to Lawrence	NB	AM	7,000	7,144	1.02	F	2,000	472	0.24	A	108	**101**	**1.4%**	7	1.5%
			PM		6,811	0.97	E		507	0.25	A	83	77	1.1%	6	1.2%
I-880	Bascom to Stevens Creek	SB	AM	7,000	5,063	0.72	C	N/A	N/A	N/A	N/A	87	87	1.7%	N/A	N/A
			PM		7,698	1.10	F		N/A	N/A	N/A	96	**96**	**1.2%**	N/A	N/A
I-880	Stevens Creek to I-280	SB	AM	6,000	3,477	0.58	C	N/A	N/A	N/A	N/A	25	25	0.7%	N/A	N/A
			PM		6,157	1.03	F		N/A	N/A	N/A	31	31	0.5%	N/A	N/A
SR 17	I-280 to Hamilton	SB	AM	8,000	5,261	0.66	C	N/A	N/A	N/A	N/A	25	25	0.5%	N/A	N/A
			PM		8,556	1.07	F		N/A	N/A	N/A	31	31	0.4%	N/A	N/A
SR 17	Hamilton to I-280	NB	AM	7,000	7,541	1.08	F	N/A	N/A	N/A	N/A	16	16	0.2%	N/A	N/A
			PM		5,386	0.77	C		N/A	N/A	N/A	39	39	0.7%	N/A	N/A
I-880	I-280 to Stevens Creek	NB	AM	6,000	6,018	1.00	F	N/A	N/A	N/A	N/A	16	16	0.3%	N/A	N/A
			PM		3,682	0.61	C		N/A	N/A	N/A	39	39	1.0%	N/A	N/A
I-880	Stevens Creek to Bascom	NB	AM	7,000	7,063	1.01	F	N/A	N/A	N/A	N/A	171	**171**	**2.4%**	N/A	N/A
			PM		5,252	0.75	C		N/A	N/A	N/A	131	131	2.5%	N/A	N/A

*Cumulative traffic volumes and HOVL proportions are based on 2010 CUA model projections with estimated Town & Country, Valley Fair, and Vacant Parcel trips added.
Note: Significant impacts are indicated in **bold**.

Cumulative Interchange Ramp Analysis

Ramp volumes under cumulative conditions were estimated by adding to existing volumes trips from approved projects, trips from the Town & Country redevelopment, and trips from the Valley Fair expansion.. The ramp volumes are included in Appendix G. The results of the ramp analysis are summarized in Table 19. The results show that all ten freeway ramps analyzed would operate at an acceptable LOS D or better during all peak hours.

Table 19
Cumulative Interchange Ramp Levels of Service

					Existing Conditions			Background Conditions			Project Conditions			Cumulative Conditions		
Interchange	Ramp	Type	Capacity	Period	Volume	V/C	LOS	Volume	V/C	LOS	Volume	V/C	LOS	Volume	V/C	LOS
I-880/Stevens Creek	SB to WB	Diagonal	2,000	AM	493	0.247	A	639	0.320	A	726	0.363	A	732	0.366	A
			2,000	PM	628	0.314	A	682	0.341	A	878	0.439	A	904	0.452	A
			2,000	Sat	850	0.425	A	904	0.452	A	1,100	0.550	A	1,132	0.566	A
I-880/Stevens Creek	SB to EB	Loop	1,800	AM	136	0.076	A	136	0.076	A	136	0.076	A	136	0.076	A
			1,800	PM	168	0.093	A	168	0.093	A	168	0.093	A	168	0.093	A
			1,800	Sat	179	0.099	A	179	0.099	A	179	0.099	A	179	0.099	A
I-880/Stevens Creek	WB to NB	Diagonal	2,000	AM	218	0.109	A	218	0.109	A	218	0.109	A	218	0.109	A
			2,000	PM	179	0.090	A	179	0.090	A	179	0.090	A	179	0.090	A
			2,000	Sat	234	0.117	A	234	0.117	A	234	0.117	A	234	0.117	A
I-880/Stevens Creek	WB to SB	Loop	1,800	AM	160	0.089	A	160	0.089	A	160	0.089	A	160	0.089	A
			1,800	PM	354	0.197	A	354	0.197	A	354	0.197	A	354	0.197	A
			1,800	Sat	270	0.150	A	270	0.150	A	270	0.150	A	270	0.150	A
I-880/Stevens Creek	NB to EB	Diagonal	2,000	AM	272	0.136	A	272	0.136	A	272	0.136	A	272	0.136	A
			2,000	PM	272	0.136	A	272	0.136	A	272	0.136	A	272	0.136	A
			2,000	Sat	501	0.251	A	501	0.251	A	501	0.251	A	501	0.251	A
I-880/Stevens Creek	NB to WB	Loop	1,800	AM	1,004	0.558	A	1,101	0.612	B	1,157	0.643	B	1,171	0.651	B
			1,800	PM	1,051	0.584	A	1,144	0.636	B	1,280	0.711	C	1,329	0.738	C
			1,800	Sat	1,245	0.692	B	1,338	0.743	C	1,474	0.819	D	1,534	0.852	D
I-880/Stevens Creek	EB to SB	Diagonal	2,000	AM	483	0.242	A	527	0.264	A	621	0.311	A	629	0.315	A
			2,000	PM	1,374	0.687	B	1,513	0.757	C	1,617	0.809	D	1,666	0.833	D
			2,000	Sat	1,364	0.682	B	1,503	0.752	C	1,607	0.804	D	1,667	0.834	D
I-880/Stevens Creek	EB to NB	Loop	1,800	AM	252	0.140	A	318	0.177	A	489	0.272	A	493	0.274	A
			1,800	PM	504	0.280	A	531	0.295	A	662	0.368	A	688	0.382	A
			1,800	Sat	750	0.417	A	777	0.432	A	908	0.504	A	940	0.522	A
I-280/Winchester	to NB	Diagonal	2,000	AM	713	0.357	A	757	0.379	A	865	0.433	A	868	0.434	A
			2,000	PM	729	0.365	A	768	0.384	A	851	0.426	A	869	0.435	A
			2,000	Sat	689	0.345	A	728	0.364	A	811	0.406	A	833	0.417	A
I-280/Winchester	from SB	Diagonal	2,000	AM	769	0.385	A	785	0.393	A	840	0.420	A	845	0.423	A
			2,000	PM	1,068	0.534	A	1,080	0.540	A	1,204	0.602	B	1,222	0.611	B
			2,000	Sat	865	0.433	A	877	0.439	A	1,001	0.501	A	1,023	0.512	A

6.
Site Access

Access to Town & Country would be provided at several signalized intersections and unsignalized driveways along Stevens Creek Boulevard, Winchester Boulevard, and Redwood Avenue. This chapter presents an evaluation of traffic conditions at the signalized access locations.

The site access analysis consists of an evaluation of three site access alternatives and an assessment of the adequacy of vehicle storage capacity into and out of the site at the signalized intersections under cumulative with project conditions. Also, to ensure that weekend peak hour conditions are satisfactorily addressed, the analysis was expanded to include an evaluation of the Saturday peak hour.

Saturday Peak-Hour Conditions

The purpose of a traffic analysis is to identify any potential impacts on traffic conditions that would be created by the project. The analysis generally focuses on the weekday AM and PM peak hours because the highest background, or ambient, traffic levels occur during the commute periods. The Town & Country redevelopment project would generate slightly more (one to two percent more) trips during the Saturday peak hour than during the weekday PM peak hour. Furthermore, the Valley Fair expansion, which contributes to traffic under cumulative conditions, would generate approximately 25 percent more trips during the Saturday peak hour than during the weekday PM peak hour. The highest combined (ambient plus project) traffic levels could occur during either the weekday peak hour or the Saturday peak hour.

Traffic counts were conducted at many of the study intersections and on nearby freeway ramps during the Saturday peak period. The peak traffic volumes on Saturday were found to occur between approximately 2:30 and 3:30 PM. A level of service analysis of Saturday cumulative with project conditions showed that Saturday peak-hour conditions would be worse than weekday PM peak-hour conditions at only one of the study intersections: Stevens Creek Boulevard and Monroe Street. With the exception of this one location, then, the analysis reported in the previous chapters does in fact reflect the worst-case conditions at the study intersections.

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Saturday peak-hour conditions were evaluated for the seven signalized intersections directly adjacent to Town & Country. These intersections are Stevens Creek and Monroe, Stevens Creek and Redwood, Stevens Creek and Emporium/Town & Country, Stevens Creek and Winchester, Winchester and Olin, Winchester and Olsen, and Winchester and Tisch. The analysis is based on the City of San Jose level of service method and was conducted for existing, background, project, and cumulative conditions. The results, summarized in Table 20, show that two of the seven intersections would operate at an unacceptable LOS E during the Saturday peak hour under cumulative conditions. The other five intersections would operate at an acceptable LOS D or better during the Saturday peak hour. The intersection level of service calculation sheets are included in Appendix D.

Traffic conditions on the interchange ramps were also evaluated for the Saturday peak hour. The results of that analysis are reported in the previous chapter.

Site Access Analysis

The evaluation of traffic conditions at the site access locations focuses on the Saturday peak hour, when traffic volumes into and out of the site would be highest. The site access analysis includes an evaluation of the site access as proposed (with secondary access at Redwood Avenue) and an evaluation of three site access alternatives.

Site Access Alternatives

The foregoing analysis presupposes that access will be provided at the existing site access locations—the signalized intersections at Winchester and Olsen, Winchester and Olin, Stevens Creek and Emporium/Town & Country, and the unsignalized right-turn-only driveway on Winchester north of Olin—plus the proposed unsignalized driveway at Redwood Avenue and Hemlock Avenue. For the purpose of the site access discussion, this will be called the proposed project access. The potential traffic impacts of three access alternatives is considered in this section. The access alternatives are as follows: (1) existing access (described above) only, (2) existing access plus secondary access to Dudley Avenue, and (3) existing access plus secondary access to both Redwood Avenue and Dudley Avenue.

The potential impacts of these access alternatives was evaluated in three ways. Existing ADT volumes on the local streets adjacent to the site were compared with the expected increase in ADT on these streets. Traffic conditions at the existing signalized intersections adjacent to the site were evaluated on the basis of level of service. The adequacy of existing vehicle storage capacity was assessed for the signalized intersections adjacent to the site.

Table 20
Saturday Peak-Hour Intersection Levels of Service—SJ Method

Intersection	Count Date	Existing		Background		Project Conditions			Cumulative Conditions	
		V/C	LOS	V/C	LOS	V/C	LOS	% INC.	V/C	LOS
Monroe/Stevens Creek	7/19/97	0.815	D	0.870	D	**0.950**	**E**	**10.00**	0.980	E
Stevens Creek/Winchester	7/19/97	0.818	D	0.826	D	0.884	D	3.78	0.914	E
Stevens Creek/Redwood	9/27/97	0.513	A	0.585	A	0.636	B	8.84	0.653	B
Stevens Creek/Emporium	9/27/97	0.627	B	0.647	B	0.676	B	5.25	0.693	B
Winchester/Olin	9/27/97	0.517	A	0.530	A	0.600	B	8.85	0.608	B
Winchester/Olsen	9/27/97	0.586	A	0.599	A	0.703	C	14.36	0.710	C
Winchester Tisch	9/27/97	0.569	A	0.610	B	0.637	B	5.24	0.648	B

'Note: Significant impacts indicated in **bold**.

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Assignment of Project Traffic with Access Alternatives

With different site access available, the assignment of project trips will differ from the project trip assignment assumed previously (Figure 6). This difference in trip assignment would apply only to the intersections located in the immediate vicinity of the site. The project trip assignments for three access alternatives are shown in Appendix H.

Volumes on Local Streets

The local streets adjacent to the site consist of Redwood Avenue, Hemlock Avenue, Dudley Avenue, and South Baywood Avenue. 24-hour tube counts were conducted on these four streets between October 1 and October 6, 1997 (see Appendix B). The existing ADT volumes are shown in Table 21. The table shows existing volumes are approximately 1,050 daily vehicles on Redwood Avenue just south of Stevens Creek, 1,650 daily vehicles on Hemlock Avenue just west of Monroe Street, 2,000 daily vehicles on South Baywood Avenue just north of Tisch Way, and 450 daily vehicles on Dudley Avenue just north of Tisch Way.

Proposed Project Access. With the proposed secondary project access to Redwood Avenue, an estimated 410 daily project trips would be added to Redwood Avenue and an estimated 2,090 daily project trips would be added to Hemlock Avenue. No project trips would be added to South Baywood Avenue or Dudley Avenue.

Existing Site Access. With existing access to the site and no secondary access provided, the project would add no appreciable volume of traffic to Redwood Avenue, Hemlock Avenue, South Baywood Avenue, or Dudley Avenue.

Secondary Access to Dudley Avenue Only. With secondary project access to Dudley Avenue, an estimated 2,130 daily project trips would be added to Dudley Avenue. No project trips would be added to South Baywood Avenue, Redwood Avenue or Hemlock Avenue.

Secondary Access to Redwood Avenue and Dudley Avenue. With secondary project access to both Redwood Avenue and Dudley Avenue, an estimated 410 daily project trips would be added to Redwood Avenue, an estimated 810 daily project trips would be added to Hemlock Avenue, and an estimated 2,130 daily project trips would be added to Dudley Avenue. No project trips would be added to South Baywood Avenue.

Intersection Level of Service with Alternative Access

The effects of alternative access on level of service at the surrounding intersections was also evaluated. The City of San Jose intersection level of service method was used to evaluate project conditions and cumulative conditions during the Saturday peak-hour at the following five intersections: Stevens Creek Boulevard and Monroe Street, Stevens Creek Boulevard and Redwood Avenue, Stevens Creek Boulevard and Emporium/Town & Country, Winchester Boulevard and Olsen Drive, and Winchester Boulevard and Tisch Way. The intersection of Winchester Boulevard and Stevens Creek Boulevard and the intersection of Winchester Boulevard and Olin Avenue were excluded form this analysis because conditions at these intersections would be

Table 21
Average Daily Trips (ADT) on Local Streets

Street	Existing ADT	Proposed Project Access		Secondary Access at Dudley Only		Secondary Access at Redwood & Dudley	
		Project ADT	Existing Plus Project ADT	Project ADT	Existing Plus Project ADT	Project ADT	Existing Plus Project ADT
Redwood Avenue	1,050	410	1,460	0	1,050	410	1,460
Hemlock Avenue	1,637	2,090	3,727	0	1,637	810	2,447
Baywood Avenue	1,999	0	1,999	0	1,999	0	1,999
Dudley Avenue	451	0	451	2,130	2,581	2,130	2,581

Note: Based on weekday counts and weekday project trip estimates.

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Table 22
Alternative Access Saturday Peak-Hour Intersection Levels of Service—SJ Method

		Proposed Project Access				Existing Site Access				Access at Dudley Only				Access at Redwood & Dudley			
		Project Conditions		Cumulative Conditions		Project Conditions		Cumulative Conditions		Project Conditions		Cumulative Conditions		Project Conditions		Cumulative Conditions	
Intersection	Count Date	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS
Monroe/Stevens Creek	7/19/97	0.950	E	0.980	E	0.926	E	0.956	E	0.939	E	0.970	E	0.950	E	0.980	E
Stevens Creek/Redwood	9/27/97	0.636	B	0.653	B	0.645	B	0.662	B	0.634	B	0.650	B	0.636	B	0.653	B
Stevens Creek/Emporium	9/27/97	0.676	B	0.693	B	0.726	C	0.742	C	0.700	C	0.717	C	0.676	B	0.693	B
Winchester/Olsen	9/27/97	0.703	C	0.710	C	0.703	C	0.710	C	0.671	B	0.679	B	0.671	B	0.679	B
Winchester/Tisch	9/27/97	0.637	B	0.648	B	0.637	B	0.648	B	0.640	B	0.650	B	0.640	B	0.650	B

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unaffected by the site access alternatives under consideration. The level of service results under the various access alternatives are summarized in Table 22. The level of service calculations are included in Appendix H.

Existing Site Access. The results show that, with the existing site access and a secondary access provided, level of service would improve slightly at Stevens Creek and Monroe, level of service would worsen slightly at Stevens Creek and Redwood and at Stevens Creek and Emporium/Town & Country, and level of service would be unchanged at Winchester and Olsen and at Winchester and Tisch.

Secondary Access to Dudley Avenue Only. With secondary access to Dudley Avenue only, level of service would improve slightly at Stevens Creek and Monroe, Winchester and Olsen, and Stevens Creek and Redwood, but level of service would worsen slightly at Winchester and Tisch, and at Stevens Creek and Emporium/Town & Country.

Secondary Access to Redwood Avenue and Dudley Avenue. With secondary access to both Redwood Avenue and Dudley Avenue, level of service would improve slightly at Winchster and Olsen, but would worsen slightly at Winchester and Tisch.

As reported previously, the intersection of Stevens Creek and Monroe would operate at an unacceptable LOS E during the Saturday peak hour under project and cumulative conditions with the proposed project access. For all three site access alternatives, traffic conditions at Monroe and Stevens Creek would be an equal or better LOS E. With the improvements proposed at the intersection (refer to Chapter 7), the intersection of Monroe and Stevens Creek would operate at an acceptable LOS D during the Saturday peak hour under project and cumulative conditions for all three site access alternatives. The other four signalized intersections analyzed would operate at an acceptable LOS D or better for all site access alternatives considered.

Vehicle Queuing and Storage Capacity

When a queue of stopped vehicles extends back into an upstream intersection or driveway, or when it extends out of a turn pocket and into the adjacent lane, traffic conditions are adversely impacted. This type of impact can be identified through an analysis and comparison of vehicle queuing and vehicle storage capacity.

The same five signalized intersections were analyzed to determine whether the existing storage capacity of turn pockets and on-site intersection approaches would be sufficient to accommodate future traffic. The *SIGNAL94* level of service software was used to estimate 90th-percentile maximum vehicle queue lengths for various intersection turning movements during the peak hours under cumulative with project conditions. These estimated maximum queues were compared to the existing storage capacity to determine if the vehicle queue would exceed the available storage. This analysis was performed for all four site access scenarios.

Note that pass-by trips (see Chapter 4), which have been excluded from the traffic volumes analyzed thus far, have been included for the analysis of site access conditions. This is because the pass-by trips affect turning movements at the site access locations.

The results of the vehicle queuing analysis are shown in Table 23. The results show that the existing storage capacity at the five signalized intersections is adequate to accommodate the projected maximum vehicle queues under cumulative with project conditions for all of the site access scenarios. The SIGNAL94 level of service (and queue length) calculations are included in Appendix H.

Table 23

Vehicle Storage at Site Access

	Storage Length (# feet)																			
	Stevens Creek/ Redwood	Stevens Creek/Emporium					Stevens Creek/ Monroe		Winchester/Olsen					Winchester/Olin					Winchester/ [illegible]
	WBL	WBL	EBR	NBR	NBT	NBL	WBL	EBR	SBL	NBR	WBR	WBT	WBL	SBL	NBR	WBR	WBT	WBL	WBT
Proposed Project Access																			
Existing	140	330	200	/a/	/a/	/a/	380	/a/	150	n/a	/a/	/a/	/a/	340	n/a	/a/	/a/	/a/	/a/
Required	130	240	50	280	90	50	350	50	120		80	30	300	310		120	30	160	50
Existing Site Access																			
Existing	140	330	200	/a/	/a/	/a/	380	/a/	150	n/a	/a/	/a/	/a/	340	n/a	/a/	/a/	/a/	/a/
Required	110	330	50	380	100	50	250	50	120		80	30	300	310		120	30	160	50
Access at Dudley																			
Existing	140	330	200	/a/	/a/	/a/	380	/a/	150	n/a	/a/	/a/	/a/	340	n/a	/a/	/a/	/a/	/a/
Required	110	290	50	340	100	50	300	50	120		80	30	260	310		120	30	160	20
Access at Redwood and Dudley																			
Existing	140	330	200	/a/	/a/	/a/	380	/a/	150	n/a	/a/	/a/	/a/	340	n/a	/a/	/a/	/a/	/a/
Required	130	240	50	280	90	50	350	50	120		80	30	260	310		120	30	160	20

[a] No storage limitation.

Note: Required lengths are based on cumulative with project Saturday peak-hour SIGNAL94 results.

WB = westbound, NB = northbound, EB = eastbound, SB = southbound

L = left turn, T = through, R = right turn

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7.
Impacts and Mitigation Measures

This chapter describes the project impacts and the measures that are recommended to mitigate the impacts. Included are descriptions of the significance criteria that define an impact, identification of the impacts, and specifications of the mitigation measure corresponding to each impact.

Significance Criteria

Significance criteria are used to establish what constitutes an impact. For this analysis there are two sets of relevant criteria: the City of San Jose Level of Service Policy, and the CMP standards of operation.

City of San Jose Definition of Significant Impacts

A project is said to create a significant adverse impact on traffic conditions at a City of San Jose signalized intersection if for either peak hour:

1. The level of service at the intersection degrades from an acceptable LOS D or better under background conditions to an unacceptable LOS E or F under project conditions, or

2. The level of service at the intersection is an unacceptable LOS E or F under background conditions and the addition of project trips causes the critical-movement volume at the intersection to increase by one percent or greater.

A significant impact by City of San Jose standards is said to be satisfactorily mitigated when measures are implemented that would restore intersection conditions to LOS D or better.

CMP Definition of Significant Impacts

Intersections. A project is said to create a significant adverse impact on traffic conditions at a CMP intersection if for either peak hour:

1. The level of service at the intersection degrades from an acceptable LOS E or better under background conditions to an unacceptable LOS F under project conditions, or
2. The level of service at the intersection is an unacceptable LOS F under background conditions and the addition of project trips causes the critical-movement delay at the intersection to increase by four or more seconds.

A significant impact by CMP standards is said to be satisfactorily mitigated when measures are implemented that would restore intersection conditions to LOS E or better.

Freeway segments. A project is said to create a significant adverse impact on traffic conditions on a CMP freeway segment if for either peak hour:

1. The level of service on the freeway segment is an unacceptable LOS F under project conditions, and
2. The number of project trips on that segment constitutes at least one percent of capacity on that segment.

A significant impact by CMP standards is said to be satisfactorily mitigated when measures are implemented that would restore freeway conditions to LOS E or better.

In order to distinguish between impacts and mitigation measures under project conditions versus cumulative conditions, the impacts and mitigation measures are identified with P for project or C for cumulative.

Project Impacts

The project would significantly impact traffic conditions at the following three intersections:

Winchester Boulevard and Moorpark Avenue
Winchester Boulevard and Stevens Creek Boulevard
Stevens Creek Boulevard and Monroe Street

The project also would significantly impact traffic conditions on the following freeway segments:

I-280 southbound from Lawrence Expressway to Saratoga Avenue
I-280 southbound from Saratoga Avenue to Winchester Boulevard
I-280 northbound from Winchester Boulevard to Saratoga Avenue
I-280 northbound from Saratoga Avenue to Lawrence Expressway

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I-880 southbound from Bascom Avenue to Stevens Creek Boulevard
I-880 northbound from Stevens Creek Boulevard to Bascom Avenue

The impacts and mitigation measures are described below.

Winchester Boulevard and Moorpark Avenue

Impact P-1: Based on the City of San Jose LOS methodology, weekday AM peak-hour level of service at the intersection of Winchester Boulevard and Moorpark Avenue would be an unacceptable LOS E under background conditions and the addition of project trips would cause the critical-movement volume at the intersection to increase by 2 percent during the weekday AM peak hour. This constitutes a significant impact by City of San Jose standards.

Mitigation Measure P-1: Intersection operations would be restored to LOS D with the addition of a second eastbound left-turn lane, the conversion of the existing eastbound shared through-left-turn lane to an exclusive through lane, and the addition of a second westbound left-turn lane. These improvements can be accommodated within the existing curb-to-curb width.

Winchester Boulevard and Stevens Creek Boulevard

Impact P-2: Based on the City of San Jose LOS methodology, level of service at the intersection of Winchester Boulevard and Stevens Creek Boulevard would degrade from LOS D under background conditions to LOS E under project conditions during the weekday PM peak hour. This constitutes a significant impact by City of San Jose standards.

Mitigation Measure P-2: Intersection operations would be restored to LOS D or better with the addition of a second northbound left-turn lane and a second southbound left-turn lane. These improvements cannot be accommodated within the existing curb-to-curb width. Implementation of the improvements would entail the removal and reconstruction of the curb, gutter, and sidewalk, repaving and restriping in both directions of each of the south and north approaches, acquisition of 7 feet of right-of-way along the west edge of the north approach over a distance of 400 feet, and the loss of approximately 20 parking spaces along the west side of the south approach.

Stevens Creek Boulevard and Monroe Street

Impact P-3: Based on the City of San Jose LOS methodology, level of service at the intersection of Stevens Creek Boulevard and Monroe Street would degrade from LOS D under background conditions to LOS E under project conditions during the Saturday peak hour. This constitutes a significant impact by City of San Jose standards.

Mitigation Measure P-3: Intersection operations would be restored to LOS D with the addition of a fourth eastbound through lane. This improvement cannot be accommodated within the existing curb-to-curb width. Implementation of the improvement would entail the removal and reconstruction of the curb, gutter, and sidewalk, repaving and restriping of the west and east approaches in the eastbound direction, and acquisition of 10 feet of right-of-way along the south edge of Stevens Creek Boulevard over a distance of 600 feet from Monroe Street to the southbound on-ramp to I-880. The additional eastbound through lane will transition into the second lane of the existing single-lane southbound on-ramp to I-880. The southbound on-ramp will need to be widened from one lane to two. Striping and signage should be installed that warns drivers of the transition of the eastbound shoulder lane to a southbound on-ramp to I-880.

I-280 and I-880

Impact P-4: On six segments of I-280 and I-880 the mixed-flow lanes would operate at an unacceptable LOS F during at least one of the peak hours under project conditions and the number of peak-hour project trips would constitute at least one percent of freeway capacity. This constitutes a significant impact by CMP standards.

Mitigation Measure P-4. Level of service in the mixed-flow lanes of the six impacted freeway segments would be restored to an acceptable LOS E or better with the installation of additional lanes on each segment. The addition of freeway lanes would entail widening the I-280 and I-880 freeways over the length of the impacted segments. These improvements are considered to be infeasible.

ignificance Criteria for Cumulative Impacts

The significance criteria used for cumulative impacs are based on the City of San Jose Level of Service Policy for cumulative conditions.

City of San Jose Definition of Significant Impacts Under Cumulative Conditions

A project is said to create a significant adverse impact on cumulative traffic conditions at a City of San Jose signalized intersection if for either peak hour:

1. The level of service at the intersection degrades from an acceptable LOS D or better under background conditions to an unacceptable LOS E or F under cumulative conditions, or

2. The level of service at the intersection is an unacceptable LOS E or F under background conditions and the addition of project trips causes the critical-movement volume at the intersection to increase by one percent or greater.

A significant impact by City of San Jose standards is said to be satisfactorily mitigated when measures are implemented that would restore intersection conditions to LOS D or better.

Cumulative Impacts

The following three study intersections would be significantly impacted by the project under cumulative conditions:

Winchester Boulevard and Moorpark Avenue

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Winchester Boulevard and Stevens Creek Boulevard
Stevens Creek Boulevard and Monroe Street

The project also would significantly impact traffic conditions on the following freeway segments:

I-280 southbound from Lawrence Expressway to Saratoga Avenue
I-280 southbound from Saratoga Avenue to Winchester Boulevard
I-280 northbound from Winchester Boulevard to Saratoga Avenue
I-280 northbound from Saratoga Avenue to Lawrence Expressway
I-880 southbound from Bascom Avenue to Stevens Creek Boulevard
I-880 northbound from Stevens Creek Boulevard to Bascom Avenue

The impacts and mitigation measures are described below.

Winchester Boulevard and Moorpark Avenue

Impact C-1: Based on the City of San Jose LOS methodology, weekday AM peak-hour level of service at the intersection of Winchester Boulevard and Moorpark Avenue would be an unacceptable LOS E under background conditions and the addition of project trips would cause the critical-movement volume at the intersection to increase by 2 percent during the weekday AM peak hour. This constitutes a significant impact by City of San Jose standards.

Mitigation Measure C-1: Intersection operations would be restored to LOS D with the addition of a second eastbound left-turn lane, the conversion of the existing eastbound shared through-left-turn lane to an exclusive through lane, and the addition of a second westbound left-turn lane. These improvements can be accommodated within the existing curb-to-curb width. This mitigation measure is the same as mitigation measure P-1.

Winchester Boulevard and Stevens Creek Boulevard

Impact C-2: Based on the City of San Jose LOS methodology, level of service at the intersection of Winchester Boulevard and Stevens Creek Boulevard would degrade from an acceptable LOS D under background conditions to an unacceptable LOS E under cumulative conditions during the weekday PM and Saturday peak hours. This constitutes a significant impact by City of San Jose standards.

Mitigation Measure C-2: Intersection operations would be restored to LOS D or better with the addition of a second northbound left-turn lane and a second southbound left-turn lane. These improvements cannot be accommodated within the existing curb-to-curb width. Implementation of the improvements would entail the removal and reconstruction of the curb, gutter, and sidewalk, repaving and restriping in both directions of each of the south and north approaches, acquisition of 7 feet of right-of-way along the west edge of the north approach over a distance of 400 feet, and the loss of approximately 20 parking spaces along the west side of the south approach. This mitigation measure is the same as mitigation measure P-2.

Stevens Creek Boulevard and Monroe Street

Impact C-3: Based on the City of San Jose LOS methodology, level of service at the intersection of Stevens Creek Boulevard and Monroe Street would degrade from an acceptable LOS D under background conditions to an unacceptable LOS E under cumulative conditions during the weekday PM and Saturday peak hours. This constitutes a significant impact by City of San Jose standards.

Mitigation Measure C-3: Intersection operations would be restored to LOS D with the addition of a fourth eastbound through lane. This improvement cannot be accommodated within the existing curb-to-curb width. Implementation of the improvement would entail the removal and reconstruction of the curb, gutter, and sidewalk, repaving and restriping of the west and east approaches in the eastbound direction, and acquisition of 10 feet of right-of-way along the south edge of Stevens Creek Boulevard over a distance of 600 feet from Monroe Street to the southbound on-ramp to I-880. The additional eastbound through lane will transition into the second lane of the existing single-lane southbound on-ramp to I-880. The southbound on-ramp will need to be widened from one lane to two. Striping and signage should be installed that warns drivers of the transition of the eastbound shoulder lane to a southbound on-ramp to I-880. This mitigation measure is the same as Mitigation Measure P-3.

I-280 and I-880

Impact C-4: On six segments of I-280 and I-880 the mixed-flow lanes would operate at an unacceptable LOS F during at least one of the peak hours under cumulative conditions with the project and the number of peak-hour project trips would constitute at least one percent of freeway capacity. This constitutes a significant impact by CMP standards.

Mitigation Measure C-4. Level of service in the mixed-flow lanes of the six impacted freeway segments would be restored to an acceptable LOS E or better with the installation of additional lanes on each segment. The addition of freeway lanes would entail widening the I-280 and I-880 freeways over the length of the impacted segments. These improvements are considered to be infeasible.

Appendix A

Traffic Volumes

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INTERSECTION: I-280/Moorpark
PEAK HOUR: AM Peak Hour
COUNT DATE: 4/9/97
GROWTH
BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

	SCENARIO 1 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNTF PROJECT TRIPS (P2)			TOTAL TRIPS (P3)		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	756	0	13	16	0	0	5	0	0	55	0	0	60	0	0
East	0	467	0	0	8	0	0	0	0	0	1	0	0	1	0
South	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
West	0	507	0	0	4	0	0	0	0	0	3	0	0	3	0

	E + G			SCENARIO 2 BACKGROUND E + G + A			SCENARIO 3 PROJECT E+G+A+P1			SCENARIO 4 CUMULATIVE E+G+A+P1+P2		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	[illegible]	0	13	772	0	13	827	0	13	832	0	13
East	0	467	0	0	475	0	0	476	0	0	476	0
South	0	0	0	0	0	0	0	0	0	0	0	0
West	0	507	0	0	511	0	0	514	0	0	514	0

ECTION: I-280/Moorpark
OUR PM Peak Hour
DATE: /96
GROWTH
BACKGROUND: 3 (to August 1997 from count date @ 0.3% per month)

	SCENARIO 6 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNTF PROJECT TRIPS (P2)			TOTAL TRIPS (P3)		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	883	0	185	12	0	0	18	0	0	124	0	0	142	0	0
East	0	665	0	0	4	0	0	0	0	0	9	0	0	9	0
South	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
West	0	536	0	0	8	0	0	0	0	0	9	0	0	9	0

	E + G			SCENARIO 7 BACKGROUND E + G + A			SCENARIO 8 PROJECT E+G+A+P1			SCENARIO 9 CUMULATIVE E+G+A+P1+P2		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	909	0	191	921	0	191	1045	0	191	1063	0	191
East	0	685	0	0	689	0	0	698	0	0	698	0
South	0	0	0	0	0	0	0	0	0	0	0	0
West	0	552	0	0	560	0	0	569	0	0	569	0

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INTERSECTION: I-880/Stevens Creek
PEAK HOUR: AM Peak Hour
COUNT DATE 4/15/97
GROWTH
BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

	SCENARIO 1 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNTF PROJECT TRIPS (P2)			TOTAL TRIPS (P3)		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	0	0	426	0	0	146	0	0	6	0	0	87	0	0	93
East	0	1034	0	0	117	0	0	19	0	0	68	0	0	87	0
South	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
West	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	E + G			SCENARIO 2 BACKGROUND E + G + A			SCENARIO 3 PROJECT E+G+A+P1			SCENARIO 4 CUMULATIVE E+G+A+P1+P2		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	0	0	426	0	0	572	0	0	659	0	0	665
East	0	1034	0	0	1151	0	0	1219	0	0	1238	0
South	0	0	0	0	0	0	0	0	0	0	0	0
West	0	0	0	0	0	0	0	0	0	0	0	0

INTERSECTION: I-880/Stevens Creek
PEAK HOUR: PM Peak Hour
COUNT DATE: 10/96
GROWTH
BACKGROUND: 3 (to August 1997 from count date @ 0.3% per month)

	SCENARIO 6 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNTF PROJECT TRIPS (P2)			TOTAL TRIPS (P3)		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	0	0	642	0	0	54	0	0	26	0	0	196	0	0	222
East	0	1711	0	0	161	0	0	66	0	0	173	0	0	239	0
South	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
West	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	E + G			SCENARIO 7 BACKGROUND E + G + A			SCENARIO 8 PROJECT E+G+A+P1			SCENARIO 9 CUMULATIVE E+G+A+P1+P2		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	0	0	661	0	0	715	0	0	911	0	0	937
East	0	1762	0	0	1923	0	0	2096	0	0	2162	0
South	0	0	0	0	0	0	0	0	0	0	0	0
West	0	0	0	0	0	0	0	0	0	0	0	0

INTERSECTION Bascom/Moorpark
PEAK HOUR: AM Peak Hour
COUNT DATE: 4/17/97
GROWTH
BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

APPROACH	SCENARIO 1 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNTF PROJECT TRIPS (P2)			TOTAL TRIPS (P3)		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	425	488	186	0	8	0	0	1	0	0	0	0	0	1	0
East	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
South	367	1189	286	0	17	0	0	1	0	1	0	0	1	1	0
West	145	733	246	0	0	0	0	0	0	0	3	0	0	3	0

APPROACH	E + G			SCENARIO 2 BACKGROUND E + G + A			SCENARIO 3 PROJECT E+G+A+P1			SCENARIO 4 CUMULATIVE E+G+A+P1+P2		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	425	488	186	425	496	186	425	496	186	425	497	186
East	0	0	0	0	0	0	0	0	0	0	0	0
South	367	1189	286	367	1206	286	368	1206	286	368	1207	286
West	145	733	246	145	733	246	145	736	246	145	736	246

INTERSECTION: Bascom/Moorpark
PEAK HOUR: PM Peak Hour
COUNT DATE: 4/17/97
GROWTH
BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

APPROACH	SCENARIO 6 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNTF PROJECT TRIPS (P2)			TOTAL TRIPS (P3)		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	417	1380	386	0	17	0	0	4	0	0	0	0	0	4	0
East	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
South	247	542	407	0	8	0	0	4	0	2	0	0	2	4	0
West	123	976	413	0	0	0	0	0	0	0	0	2	0	0	2

APPROACH	E + G			SCENARIO 7 BACKGROUND E + G + A			SCENARIO 8 PROJECT E+G+A+P1			SCENARIO 9 CUMULATIVE E+G+A+P1+P2		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	417	1380	386	417	1397	386	417	1397	386	417	1401	386
East	0	0	0	0	0	0	0	0	0	0	0	0
South	247	542	407	247	550	407	249	550	407	249	554	407
West	123	976	413	123	976	413	123	976	415	123	976	415

INTERSECTION: Bascom/Naglee
PEAK HOUR: AM Peak Hour
COUNT DATE: 10/31/95
GROWTH
BACKGROUND: 6 9 (to August 1997 from count date @ 0.3% per month)

APPROACH	SCENARIO 1 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNTF PROJECT TRIPS (P2)			TOTAL TRIPS (P3)		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	71	312	128	0	0	25	0	0	1	0	2	0	0	2	1
East	115	298	92	0	9	0	0	3	0	3	3	0	3	6	0
South	238	1689	242	21	0	0	0	0	0	0	1	2	0	1	2
West	140	319	13	10	4	8	0	2	0	0	0	0	0	2	0

APPROACH	E + G			SCENARIO 2 BACKGROUND E + G + A			SCENARIO 3 PROJECT E+G+A+P1			SCENARIO 4 CUMULATIVE E+G+A+P1+P2		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	76	334	137	76	334	162	76	336	162	76	336	163
East	123	319	98	123	328	98	126	331	98	126	334	98
South	254	1806	259	275	1806	259	275	1807	261	275	1807	261
West	150	341	14	160	345	22	160	345	22	160	347	22

INTERSECTION: Bascom/Naglee
PEAK HOUR: PM Peak Hour
COUNT DATE: 4/17/97
GROWTH
BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

APPROACH	SCENARIO 6 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNTF PROJECT TRIPS (P2)			TOTAL TRIPS (P3)		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	110	1165	134	0	0	10	0	0	2	0	5	0	0	5	2
East	192	308	55	0	4	0	0	13	0	9	6	0	9	19	0
South	117	402	160	8	0	0	0	0	0	0	5	9	0	5	9
West	110	302	39	25	9	21	2	13	0	0	6	0	2	19	0

APPROACH	E + G			SCENARIO 7 BACKGROUND E + G + A			SCENARIO 8 PROJECT E+G+A+P1			SCENARIO 9 CUMULATIVE E+G+A+P1+P2		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	110	1165	134	110	1165	144	110	1170	144	110	1170	146
East	192	308	55	192	312	55	201	318	55	201	331	55
South	117	402	160	125	402	160	125	407	169	125	407	169
West	110	302	39	135	311	60	135	317	60	137	330	60

INTERSECTION: Bascom/San Carlos
PEAK HOUR: AM Peak Hour
COUNT DATE: 4/15/97
GROWTH
BACKGROUND 0 (to August 1997 from count date @ 0.3% per month)

	SCENARIO 1						VALLEY FAIR			TOWN & COUNTF			TOTAL		
	EXISTING			APPROVED TRIPS			PROJECT TRIPS			PROJECT TRIPS			TRIPS		
	(E)			(A)			(P1)			(P2)			(P3)		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	84	344	22	2	6	0	0	0	1	0	0	6	0	0	7
East	125	791	351	0	28	7	0	3	0	0	3	0	0	6	0
South	277	1480	136	3	14	0	1	0	0	1	0	0	2	0	0
West	125	250	76	0	10	2	0	2	1	4	2	1	4	4	2

				SCENARIO 2			SCENARIO 3			SCENARIO 4		
				BACKGROUND			PROJECT			CUMULATIVE		
	E + G			E + G + A			E+G+A+P1			E+G+A+P1+P2		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	84	344	22	86	350	22	86	350	28	86	350	29
East	125	791	351	125	819	358	125	822	358	125	825	358
South	277	1480	136	280	1494	136	281	1494	136	282	1494	136
West	125	250	76	125	260	78	129	262	79	129	264	80

INTERSECTION. Bascom/San Carlos
PEAK HOUR PM Peak Hour
COUNT DATE 4/15/97
GROWTH
BACKGROUND 0 (to August 1997 from count date @ 0.3% per month)

	SCENARIO 6						VALLEY FAIR			TOWN & COUNTF			TOTAL		
	EXISTING			APPROVED TRIPS			PROJECT TRIPS			PROJECT TRIPS			TRIPS		
	(E)			(A)			(P1)			(P2)			(P3)		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	272	1221	71	7	14	11	0	0	2	0	0	19	0	0	21
East	234	502	58	0	35	2	0	11	0	0	9	0	0	20	0
South	162	480	191	25	6	0	4	0	0	5	0	0	9	0	0
West	94	708	213	10	48	24	2	11	4	19	9	5	21	20	9

				SCENARIO 7			SCENARIO 8			SCENARIO 9		
				BACKGROUND			PROJECT			CUMULATIVE		
	E + G			E + G + A			E+G+A+P1			E+G+A+P1+P2		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	272	1221	71	279	1235	82	279	1235	101	279	1235	103
East	234	502	58	234	537	60	234	546	60	234	557	60
South	162	480	191	187	486	191	192	486	191	196	486	191
West	94	708	213	104	756	237	123	765	242	125	776	246

INTERSECTION: Bellrose Stevens Creek
PEAK HOUR: AM Peak Hour
COUNT DATE 6/23/95
GROWTH
BACKGROUND: 7.8 (to August 1997 from count date @ 0.3% per month)

	SCENARIO 1 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNTF PROJECT TRIPS (P2)			TOTAL TRIPS (P3)		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	20	13	30	2	0	0	0	0	0	0	0	1	0	0	1
East	6	596	20	0	20	11	0	5	0	0	10	0	0	15	0
South	155	60	28	0	0	0	0	0	0	0	0	0	0	0	0
West	29	393	22	0	13	0	0	3	0	0	7	0	0	10	0

	E + G			SCENARIO 2 BACKGROUND E + G + A			SCENARIO 3 PROJECT E+G+A+P1			SCENARIO 4 CUMULATIVE E+G+A+P1+P2		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	22	14	32	24	14	32	24	14	33	24	14	33
East	6	642	22	6	662	33	6	672	33	6	677	33
South	167	65	30	167	65	30	167	65	30	167	65	30
West	31	424	24	31	437	24	31	444	24	31	447	24

INTERSECTION: Bellrose/Stevens Creek
PEAK HOUR PM Peak Hour
COUNT DATE: 4/17/97
GROWTH
BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

	SCENARIO 6 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNTF PROJECT TRIPS (P2)			TOTAL TRIPS (P3)		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	74	140	63	11	0	0	0	0	0	0	0	2	0	0	2
East	44	709	13	0	68	2	0	17	0	0	33	0	0	50	0
South	68	30	27	0	0	0	0	0	0	0	0	0	0	0	0
West	28	960	45	0	71	0	0	17	0	2	33	0	2	50	0

	E + G			SCENARIO 7 BACKGROUND E + G + A			SCENARIO 8 PROJECT E+G+A+P1			SCENARIO 9 CUMULATIVE E+G+A+P1+P2		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	74	140	63	85	140	63	85	140	65	85	140	65
East	44	709	13	44	777	15	44	810	15	44	827	15
South	68	30	27	68	30	27	68	30	27	68	30	27
West	28	960	45	28	1031	45	30	1064	45	30	1081	45

12/11/97

INTERSECTION: Winchester/Hamilton
PEAK HOUR: AM Peak Hour
COUNT DATE: 4/17/97
GROWTH
BACKGROUND 0 (to August 1997 from count date @ 0.3% per month)

APPROACH	SCENARIO 1 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNTF PROJECT TRIPS (P2)			TOTAL TRIPS (P3)		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	358	315	87	0	0	0	0	0	0	0	0	0	0	0	0
East	301	1112	556	0	0	0	0	0	0	0	0	0	0	0	0
South	119	1026	454	0	0	0	0	1	0	0	1	0	0	2	0
West	146	648	64	0	0	0	0	0	0	0	0	0	0	0	0

APPROACH	E + G			SCENARIO 2 BACKGROUND E + G + A			SCENARIO 3 PROJECT E+G+A+P1			SCENARIO 4 CUMULATIVE E+G+A+P1+P2		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	358	315	87	358	315	87	358	315	87	358	315	87
East	301	1112	556	301	1112	556	301	1112	556	301	1112	556
South	119	1026	454	119	1026	454	119	1027	454	119	1028	454
West	146	648	64	146	648	64	146	648	64	146	648	64

INTERSECTION: Winchester/Hamilton
PEAK HOUR: PM Peak Hour
COUNT DATE: 4/17/97
GROWTH
BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

APPROACH	SCENARIO 6 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNTF PROJECT TRIPS (P2)			TOTAL TRIPS (P3)		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	601	797	130	0	0	0	0	2	0	0	2	0	0	4	0
East	398	1646	692	0	0	0	0	0	0	0	0	0	0	0	0
South	170	869	437	0	0	0	0	2	0	0	2	0	0	4	0
West	201	1092	83	0	0	0	0	0	0	0	0	0	0	0	0

APPROACH	E + G			SCENARIO 7 BACKGROUND E + G + A			SCENARIO 8 PROJECT E+G+A+P1			SCENARIO 9 CUMULATIVE E+G+A+P1+P2		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	601	797	130	601	797	130	601	799	130	601	801	130
East	398	1646	692	398	1646	692	398	1646	692	398	1646	692
South	170	869	437	170	869	437	170	871	437	170	873	437
West	201	1092	83	201	1092	83	201	1092	83	201	1092	83

INTERSECTION: Monroe/Hedding
PEAK HOUR: AM Peak Hour
COUNT DATE: 4/17/97
GROWTH
BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

	SCENARIO 1 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNTF PROJECT TRIPS (P2)			TOTAL TRIPS (P3)		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	57	129	27	0	0	0	0	2	0	0	0	4	0	2	4
East	14	253	61	0	0	0	1	0	0	0	1	0	1	1	0
South	34	280	20	0	0	0	0	2	0	0	0	0	0	2	0
West	32	616	57	0	0	6	0	0	0	2	0	0	2	0	0

	E + G			SCENARIO 2 BACKGROUND E + G + A			SCENARIO 3 PROJECT E+G+A+P1			SCENARIO 4 CUMULATIVE E+G+A+P1+P2		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	57	129	27	57	129	27	57	129	31	57	129	35
East	14	253	61	14	253	61	14	254	61	14	255	61
South	34	280	20	34	280	20	34	280	20	34	280	20
West	32	616	57	32	616	63	34	616	63	36	616	63

INTERSECTION: Monroe/Hedding
PEAK HOUR: PM Peak Hour
COUNT DATE: 4/17/97
GROWTH
BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

	SCENARIO 6 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNTF PROJECT TRIPS (P2)			TOTAL TRIPS (P3)		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
													0	0	0
North	111	450	36	0	0	0	0	8	0	0	0	11	0	8	11
East	71	441	76	0	0	0	2	0	0	0	2	0	2	2	0
South	28	208	40	6	0	0	0	8	2	0	16	13	0	24	15
West	74	477	103	0	0	6	0	0	0	11	2	0	11	2	0

	E + G			SCENARIO 7 BACKGROUND E + G + A			SCENARIO 8 PROJECT E+G+A+P1			SCENARIO 9 CUMULATIVE E+G+A+P1+P2		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	111	450	36	111	450	36	111	450	47	111	450	58
East	71	441	76	71	441	76	71	443	76	71	445	76
South	28	208	40	34	208	40	34	224	53	34	240	66
West	74	477	103	74	477	109	85	479	109	96	481	109

INTERSECTION: Winchester/Hedding
PEAK HOUR: AM Peak Hour
COUNT DATE: 4/17/97
GROWTH
BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

	SCENARIO 1 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNTF PROJECT TRIPS (P2)			TOTAL TRIPS (P3)		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	41	216	38	0	0	0	0	2	0	0	5	0	0	7	0
East	39	229	31	0	0	0	0	0	0	5	0	0	5	0	0
South	145	867	176	0	0	0	1	1	0	0	3	2	1	4	2
West	40	472	89	0	0	6	0	0	2	0	0	0	0	0	2

	E + G			SCENARIO 2 BACKGROUND E + G + A			SCENARIO 3 PROJECT E+G+A+P1			SCENARIO 4 CUMULATIVE E+G+A+P1+P2		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	41	216	38	41	216	36	41	221	38	41	226	38
East	39	229	31	39	229	31	44	229	31	49	229	31
South	145	867	176	145	867	176	145	870	178	145	873	180
West	40	472	89	40	472	95	40	472	95	40	472	95

INTERSECTION: Winchester/Hedding
PEAK HOUR: PM Peak Hour
COUNT DATE: 4/17/97
GROWTH
BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

	SCENARIO 6 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNTF PROJECT TRIPS (P2)			TOTAL TRIPS (P3)		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	59	711	79	0	0	0	0	9	0	0	16	0	0	25	0
East	90	347	37	0	0	0	0	0	0	13	0	0	13	0	0
South	210	396	74	0	0	0	6	9	0	0	16	13	6	25	13
West	47	475	229	0	0	0	0	0	6	0	0	0	0	0	6

	E + G			SCENARIO 7 BACKGROUND E + G + A			SCENARIO 8 PROJECT E+G+A+P1			SCENARIO 9 CUMULATIVE E+G+A+P1+P2		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	59	711	79	59	711	79	59	727	79	59	743	79
East	90	347	37	90	347	37	103	347	37	116	347	37
South	210	396	74	210	396	74	210	412	87	210	428	100
West	47	475	229	47	475	229	47	475	229	47	475	229

12/11/97

INTERSECTION: Monroe/Stevens Creek
PEAK HOUR: AM Peak Hour
COUNT DATE: 4/9/97
GROWTH
BACKGROUND. 0 (to August 1997 from count date @ 0.3% per month)

APPROACH	SCENARIO 1 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNTF PROJECT TRIPS (P2)			TOTAL TRIPS (P3)		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	61	9	15	0	12	0	8	0	0	0	0	0	8	0	0
East	395	1689	177	252	11	0	0	12	13	55	100	0	55	112	13
South	28	23	180	5	3	109	0	0	0	0	0	105	0	0	105
West	25	761	27	0	14	20	0	7	0	0	167	0	0	174	0

APPROACH	E + G			SCENARIO 2 BACKGROUND E + G + A			SCENARIO 3 PROJECT E+G+A+P1			SCENARIO 4 CUMULATIVE E+G+A+P1+P2		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	61	9	15	61	21	15	61	21	15	69	21	15
East	395	1689	177	647	1700	177	702	1800	177	702	1812	190
South	28	23	180	33	26	289	33	26	394	33	26	394
West	25	761	27	25	775	47	25	942	47	25	949	47

INTERSECTION: Monroe/Stevens Creek
PEAK HOUR: PM Peak Hour
COUNT DATE 7/8/97
GROWTH
BACKGROUND. 0 (to August 1997 from count date @ 0.3% per month)

APPROACH	SCENARIO 6 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNTF PROJECT TRIPS (P2)			TOTAL TRIPS (P3)		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	518	45	114	0	3	22	47	0	0	0	0	0	47	0	0
East	352	1581	395	109	106	0	0	45	47	124	245	0	124	290	47
South	37	35	256	20	12	299	0	0	0	0	0	85	0	0	85
West	74	1749	18	81	57	5	0	45	0	0	187	0	0	232	0

APPROACH	E + G			SCENARIO 7 BACKGROUND E + G + A			SCENARIO 8 PROJECT E+G+A+P1			SCENARIO 9 CUMULATIVE E+G+A+P1+P2		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	518	45	114	518	48	136	518	48	136	565	48	136
East	352	1581	395	461	1687	395	585	1932	395	585	1977	442
South	37	35	256	57	47	555	57	47	640	57	47	640
West	74	1749	18	155	1806	23	155	1993	23	155	2038	23

97-036

INTERSECTION: Monroe/Stevens Creek
PEAK HOUR: Saturday Peak Hour
COUNT DATE: 7/19/97
GROWTH
BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

	SCENARIO 6 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNT PROJECT TRIPS (P2)			TOTAL TRIPS (P4)		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	740	25	279	0	3	22	58	0	0	0	0	0	58	0	0
East	164	1268	908	109	106	0	0	56	55	124	248	0	124	304	58
South	24	40	157	20	12	299	0	0	0	0	0	85	0	0	85
West	137	1989	16	81	57	5	0	56	0	0	190	0	0	246	0

	E + G			SCENARIO 7 BACKGROUND E + G + A			SCENARIO 8 PROJECT E+G+A+P1			SCENARIO 9 CUMULATIVE E+G+A+P1+P2		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	740	25	279	740	28	301	740	28	301	798	28	301
East	164	1268	908	273	1374	908	397	1622	908	397	1678	966
South	24	40	157	44	52	456	44	52	541	44	52	541
West	137	1989	16	218	2046	21	218	2236	21	218	2292	21

INTERSECTION: San Tomas/Moorpark
PEAK HOUR: AM Peak Hour
COUNT DATE: 4/17/97
GROWTH
BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

	SCENARIO 1 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNTF PROJECT TRIPS (P2)			TOTAL TRIPS (P3)		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	128	560	79	0	0	0	0	1	0	0	0	0	0	1	0
East	72	326	296	0	0	0	0	0	0	1	0	0	1	0	0
South	181	2892	81	0	0	0	0	2	0	0	0	2	0	2	2
West	174	172	69	0	0	0	0	0	0	0	0	0	0	0	0

	E + G			SCENARIO 2 BACKGROUND E + G + A			SCENARIO 3 PROJECT E+G+A+P1			SCENARIO 4 CUMULATIVE E+G+A+P1+P2		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	128	560	79	128	560	79	128	560	79	128	561	79
East	72	326	296	72	326	296	73	326	296	73	326	296
South	181	2892	81	181	2892	81	181	2892	83	181	2894	83
West	174	172	69	174	172	69	174	172	69	174	172	69

INTERSECTION: San Tomas/Moorpark
PEAK HOUR: PM Peak Hour
COUNT DATE: 10/96
GROWTH
BACKGROUND: 3 (to August 1997 from count date @ 0.3% per month)

	SCENARIO 6 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNTF PROJECT TRIPS (P2)			TOTAL TRIPS (P3)		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	309	2352	187	0	0	0	0	8	0	0	0	0	0	8	0
East	143	315	95	0	0	0	0	0	0	7	0	0	7	0	0
South	112	878	86	0	0	0	0	8	0	0	0	7	0	8	7
West	119	430	203	0	0	0	0	0	0	0	0	0	0	0	0

	E + G			SCENARIO 7 BACKGROUND E + G + A			SCENARIO 8 PROJECT E+G+A+P1			SCENARIO 9 CUMULATIVE E+G+A+P1+P2		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	318	2423	193	318	2423	193	318	2423	193	318	2431	193
East	147	324	98	147	324	98	154	324	98	154	324	98
South	115	904	89	115	904	89	115	904	96	115	912	96
West	123	443	209	123	443	209	123	443	209	123	443	209

12/11/97

INTERSECTION: San Tomas/Stevens Creek
PEAK HOUR: AM Peak Hour
COUNT DATE: 4/17/97
GROWTH
BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

	SCENARIO 1 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNTF PROJECT TRIPS (P2)			TOTAL TRIPS (P3)		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	92	552	45	0	0	0	4	0	0	24	0	0	28	0	0
East	111	729	124	0	2	0	1	2	3	0	24	44	1	26	47
South	261	2757	72	1	0	0	0	0	2	0	0	0	0	0	2
West	98	431	109	0	4	2	0	3	0	0	14	0	0	17	0

	E + G			SCENARIO 2 BACKGROUND E + G + A			SCENARIO 3 PROJECT E+G+A+P1			SCENARIO 4 CUMULATIVE E+G+A+P1+P2		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	92	552	45	92	552	45	116	552	45	140	552	45
East	111	729	124	111	731	124	111	755	168	111	779	212
South	261	2757	72	262	2757	72	262	2757	72	262	2757	72
West	98	431	109	98	435	111	98	449	111	98	463	111

INTERSECTION: San Tomas/Stevens Creek
PEAK HOUR: PM Peak Hour
COUNT DATE: 7/9/97
GROWTH
BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

	SCENARIO 6 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNTF PROJECT TRIPS (P2)			TOTAL TRIPS (P3)		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	321	2153	126	0	0	0	16	0	0	58	0	0	74	0	0
East	283	915	171	0	4	0	8	13	6	0	27	42	8	40	48
South	190	674	182	2	0	0	0	0	8	0	0	0	0	0	8
West	60	955	370	0	2	1	0	13	0	0	35	0	0	48	0

	E + G			SCENARIO 7 BACKGROUND E + G + A			SCENARIO 8 PROJECT E+G+A+P1			SCENARIO 9 CUMULATIVE E+G+A+P1+P2		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	321	2153	126	321	2153	126	379	2153	126	437	2153	126
East	283	915	171	283	919	171	283	946	213	283	973	255
South	190	674	182	192	674	182	192	674	182	192	674	182
West	60	955	370	60	957	371	60	992	371	60	1027	371

12/11/97

INTERSECTION: Winchester/Moorpark
PEAK HOUR: AM Peak Hour
COUNT DATE: 10/01/97
GROWTH
BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

APPROACH	SCENARIO 1 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNTF PROJECT TRIPS (P2)			TOTAL TRIPS (P3)		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	97	239	86	3	18	39	1	2	0	0	3	1	1	5	1
East	482	413	149	0	6	3	0	0	1	0	0	1	0	0	2
South	70	1608	286	9	38	0	0	5	0	0	5	0	0	10	0
West	542	539	156	12	1	3	5	0	0	58	0	0	63	0	0

APPROACH	E + G			SCENARIO 2 BACKGROUND E + G + A			SCENARIO 3 PROJECT E+G+A+P1			SCENARIO 4 CUMULATIVE E+G+A+P1+P2		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	97	239	86	100	257	125	100	260	126	101	262	126
East	482	413	149	482	419	152	482	419	153	482	419	154
South	70	1608	286	79	1646	286	79	1651	286	79	1656	286
West	542	539	156	554	540	159	612	540	159	617	540	159

INTERSECTION: Winchester/Moorpark
PEAK HOUR: PM Peak Hour
COUNT DATE: 7/10/97
GROWTH
BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

APPROACH	SCENARIO 6 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNTF PROJECT TRIPS (P2)			TOTAL TRIPS (P3)		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	210	1252	197	3	58	12	4	15	0	2	19	9	6	34	9
East	310	336	305	0	1	3	0	0	4	0	0	2	0	0	6
South	76	713	355	3	38	0	0	15	0	0	19	0	0	34	0
West	507	689	475	44	6	9	18	0	0	133	0	0	151	0	0

APPROACH	E + G			SCENARIO 7 BACKGROUND E + G + A			SCENARIO 8 PROJECT E+G+A+P1			SCENARIO 9 CUMULATIVE E+G+A+P1+P2		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	210	1252	197	213	1310	209	215	1329	218	219	1344	218
East	310	336	305	310	337	308	310	337	310	310	337	314
South	76	713	355	79	751	355	79	770	355	79	785	355
West	507	689	475	551	695	484	684	695	484	702	695	484

12/11/97

INTERSECTION Saratoga/Stevens Creek
PEAK HOUR: AM Peak Hour
COUNT DATE: 5/21/96
GROWTH
BACKGROUND: 4.5 (to August 1997 from count date @ 0.3% per month)

	SCENARIO 1 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNTF PROJECT TRIPS (P2)			TOTAL TRIPS (P3)		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	61	397	85	0	0	1	0	0	0	0	0	0	0	0	0
East	121	782	41	0	3	0	0	2	0	0	24	0	0	26	0
South	240	920	155	0	0	0	0	0	0	0	0	0	0	0	0
West	92	313	88	3	6	0	0	3	0	0	14	0	0	17	0

	E + G			SCENARIO 2 BACKGROUND F + G + A			SCENARIO 3 PROJECT E+G+A+P1			SCENARIO 4 CUMULATIVE E+G+A+P1+P2		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	64	415	89	64	415	90	64	415	90	64	415	90
East	126	817	43	126	820	43	126	844	43	126	868	43
South	251	961	162	251	961	162	251	961	162	251	961	162
West	96	327	92	99	333	92	99	347	92	99	361	92

INTERSECTION Saratoga/Stevens Creek
PEAK HOUR: PM Peak Hour
COUNT DATE: 10/96
GROWTH
BACKGROUND: 3 (to August 1997 from count date @ 0.3% per month)

	SCENARIO 6 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNTF PROJECT TRIPS (P2)			TOTAL TRIPS (P3)		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	141	851	148	0	0	3	0	0	0	0	0	0	0	0	0
East	203	727	51	0	6	0	0	13	0	0	27	0	0	40	0
South	238	667	260	0	0	0	0	0	0	0	0	0	0	0	0
West	140	1000	209	1	3	0	0	13	0	0	35	0	0	48	0

	E + G			SCENARIO 7 BACKGROUND E + G + A			SCENARIO 8 PROJECT E+G+A+P1			SCENARIO 9 CUMULATIVE E+G+A+P1+P2		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	145	877	152	145	877	155	145	877	155	145	877	155
East	209	749	53	209	755	53	209	782	53	209	809	53
South	245	687	268	245	687	268	245	687	268	245	687	268
West	144	1030	215	145	1033	215	145	1068	215	145	1103	215

12/11/97

INTERSECTION: Winchester/Olsen
PEAK HOUR: Saturday Peak Hour
COUNT DATE: 10/4/97
GROWTH
BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

	SCENARIO 6 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNT PROJECT TRIPS (P2)			TOTAL TRIPS (P4)		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	78	1138	101	0	16	0	0	32	0	16	12	0	16	44	0
East	151	14	108	0	0	0	0	0	0	102	0	16	102	0	16
South	98	1208	154	0	51	0	0	32	0	0	12	143	0	44	143
West	76	23	236	0	0	0	0	0	0	0	0	0	0	0	0

	E + G			SCENARIO 7 BACKGROUND E + G + A			SCENARIO 8 PROJECT E+G+A+P1			SCENARIO 9 CUMULATIVE E+G+A+P1+P2		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	78	1138	101	78	1154	101	94	1166	101	94	1198	101
East	151	14	108	151	14	108	253	14	124	253	14	124
South	98	1208	154	98	1259	154	98	1271	297	98	1303	297
West	76	23	236	76	23	236	76	23	236	76	23	236

12/11/97

INTERSECTION: Winchester/Olin
PEAK HOUR: AM Peak Hour
COUNT DATE: 4/16/97
GROWTH
BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

APPROACH	SCENARIO 1 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNT PROJECT TRIPS (P2)			TOTAL TRIPS (P3)		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	43	513	8	0	26	0	0	4	0	45	5	0	45	9	0
East	4	1	12	0	0	0	0	0	0	2	0	70	2	0	70
South	11	1436	36	0	16	0	0	8	0	0	3	3	0	11	3
West	12	0	17	0	0	0	0	0	0	0	0	0	0	0	0

APPROACH	E + G			SCENARIO 2 BACKGROUND E + G + A			SCENARIO 3 PROJECT E+G+A+P1			SCENARIO 4 CUMULATIVE E+G+A+P1+P2		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	43	513	8	43	539	8	88	544	8	88	548	8
East	4	1	12	4	1	12	6	1	82	6	1	82
South	11	1436	36	11	1452	36	11	1455	39	11	1463	39
West	12	0	17	12	0	17	12	0	17	12	0	17

INTERSECTION: Winchester/Olin
PEAK HOUR: PM Peak Hour
COUNT DATE: 4/16/97
GROWTH
BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

APPROACH	SCENARIO 6 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNT PROJECT TRIPS (P2)			TOTAL TRIPS (P3)		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	114	1410	40	0	16	0	0	26	0	110	16	0	110	42	0
East	56	1	25	0	0	0	0	0	0	12	0	86	12	0	86
South	22	925	51	0	51	0	0	26	0	0	16	12	0	42	12
West	22	3	29	0	0	0	0	0	0	0	0	0	0	0	0

APPROACH	E + G			SCENARIO 7 BACKGROUND E + G + A			SCENARIO 8 PROJECT E+G+A+P1			SCENARIO 9 CUMULATIVE E+G+A+P1+P2		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	114	1410	40	114	1426	40	224	1442	40	224	1468	40
East	56	1	25	56	1	25	68	1	111	68	1	111
South	22	925	51	22	976	51	22	992	63	22	1018	63
West	22	3	29	22	3	29	22	3	29	22	3	29

97-036

12/11/97

INTERSECTION: Winchester/Olin
PEAK HOUR: Saturday Peak Hour
COUNT DATE: 9/27/97
GROWTH
BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

	SCENARIO 6 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNT PROJECT TRIPS (P2)			TOTAL TRIPS (P4)		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	177	1051	37	0	16	0	0	32	0	111	16	0	111	48	0
East	116	9	88	0	0	0	0	0	0	12	0	87	12	0	87
South	30	1221	77	0	51	0	0	32	0	0	16	12	0	48	12
West	46	9	43	0	0	0	0	0	0	0	0	0	0	0	0

	E + G			SCENARIO 7 BACKGROUND E + G + A			SCENARIO 8 PROJECT E+G+A+P1			SCENARIO 9 CUMULATIVE E+G+A+P1+P2		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	177	1051	37	177	1067	37	288	1083	37	288	1115	37
East	116	9	88	116	9	88	128	9	175	128	9	175
South	30	1221	77	30	1272	77	30	1288	89	30	1320	89
West	46	9	43	46	9	43	46	9	43	46	9	43

Appendix B

Traffic Counts

```
TOWN & COUNTRY                                                          SUM-IT
WED/CLEAR                                                           COUNT DATE
C.HOLMES/D.COOMBS                                                      4/09/97

1 - I280 OFFRAMP/MOORPARK                                         MORNING PEAK
==============================================================================

                                 : 769/0.90         :
                                 :                  :  N/S Street:
       Hour Ending: 08:30a       : 13               :  I280 OFFRAMP
                                 : :  0           0 :
                                 : :  :  756        :
                                 : :  :             :
                                 : :  :             :
                ---------------+ :  :           A +---------------
                    480    ----+    ----+      --------   :
                                    V          <---------  467     467/0.91
                               A               --------   :
                  0 --------+                     V
    507/0.86    507 ---------->              A
                  0 --------+      ---+      :   +---->   1263
                ---------------+ V      :    :   : +--------------
                               :        :    :   : :  E/W Street:
                               :        :    :   : :  MOORPARK
        Intersection           :        0    :   : :
        ===============        :    0        0   : :
        Total Vol: 1743        :                 0 :
        PH Factor: 0.90        :                   :
                               :           0/0.00  :

==============================================================================
```

```
1 - I280 OFFRAMP/MOORPARK                                         EVENING PEAK
==============================================================================

                                 : 932/0.93         :
                                 :                  :  N/S Street:
       Hour Ending: 06:00p       : 81               :  I280 OFFRAMP
                                 : :  0           0 :
                                 : :  :  851        :
                                 : :  :  :          :
                                 : :  :  :          :
                ---------------+ :  :  :        A +---------------
                    588    <---+    :  +--->    +--------  0
                                    V          <---------  507     507/0.84
                               A                +--------  0
                  0 --------+                    V
    737/0.98    737 ---------->              A
                  0 --------+      <---+     :   +--->    1588
                ---------------+ V      :    :   : +--------------
                               :        :    :   : :  E/W Street:
                               :        :    :   : :  MOORPARK
        Intersection           :        0    :   : :
        ===============        :    0        0   : :
        Total Vol: 2176        :                 0 :
        PH Factor: 0.96        :                   :
                               :           0/0.00  :

==============================================================================
```

97-036

INTERSECTION: Emporium/Stevens Creek
PEAK HOUR: AM Peak Hour
COUNT DATE: 4/15/97
GROWTH
BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

APPROACH	SCENARIO 1 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNTF PROJECT TRIPS (P2)			TOTAL TRIPS (P3)		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	20	3	5	0	0	0	0	0	0	0	0	0	0	0	0
East	98	1523	12	0	13	0	0	9	0	88	0	0	88	9	0
South	14	6	33	0	0	0	0	1	0	0	0	142	0	1	142
West	20	735	15	0	24	0	0	15	0	0	0	0	0	15	0

APPROACH	E + G			SCENARIO 2 BACKGROUND E + G + A			SCENARIO 3 PROJECT E+G+A+P1			SCENARIO 4 CUMULATIVE E+G+A+P1+P2		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	20	3	5	20	3	5	20	3	5	20	3	5
East	98	1523	12	98	1536	12	186	1536	12	186	1545	12
South	14	6	33	14	6	33	14	6	175	14	7	175
West	20	735	15	20	759	15	20	759	15	20	774	15

INTERSECTION: Emporium/Stevens Creek
PEAK HOUR: PM Peak Hour
COUNT DATE: 4/15/97
GROWTH
BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

APPROACH	SCENARIO 6 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNTF PROJECT TRIPS (P2)			TOTAL TRIPS (P3)		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	134	20	99	0	0	0	0	2	0	0	0	0	0	2	0
East	172	1273	29	0	86	0	0	56	0	220	0	0	220	56	0
South	35	19	141	0	0	0	0	2	0	0	0	171	0	2	171
West	156	1439	46	0	103	0	0	56	0	0	0	0	0	56	0

APPROACH	E + G			SCENARIO 7 BACKGROUND E + G + A			SCENARIO 8 PROJECT E+G+A+P1			SCENARIO 9 CUMULATIVE E+G+A+P1+P2		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	134	20	99	134	20	99	134	20	99	134	22	99
East	172	1273	29	172	1359	29	392	1359	29	392	1415	29
South	35	19	141	35	19	141	35	19	312	35	21	312
West	156	1439	46	156	1542	46	156	1542	46	156	1598	46

12/11/97

INTERSECTION Stevens Creek/Emporium
PEAK HOUR: Saturday Peak Hour
COUNT DATE: 9/27/97
GROWTH
BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

	SCENARIO 6 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNT PROJECT TRIPS (P2)			TOTAL TRIPS (P4)		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	178	46	196	0	0	0	0	2	0	0	0	0	0	2	0
East	177	1502	99	0	86	0	0	69	0	223	0	0	223	69	0
South	48	87	223	0	0	0	0	2	0	0	0	174	0	2	174
West	374	1576	63	0	103	0	0	69	0	0	0	0	0	69	0

	E + G			SCENARIO 7 BACKGROUND E + G + A			SCENARIO 8 PROJECT E+G+A+P1			SCENARIO 9 CUMULATIVE E+G+A+P1+P2		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	178	46	196	178	46	196	178	46	196	178	48	196
East	177	1502	99	177	1588	99	400	1588	99	400	1657	99
South	48	87	223	48	87	223	48	87	397	48	89	397
West	374	1576	63	374	1679	63	374	1679	63	374	1748	63

INTERSECTION: Redwood/Stevens Creek
PEAK HOUR AM Peak Hour
COUNT DATE. 4/10/97
GROWTH
BACKGROUND. 0 (to August 1997 from count date @ 0.3% per month)

APPROACH	SCENARIO 1 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNTF PROJECT TRIPS (P2)			TOTAL TRIPS (P3)		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	17	0	9	0	0	0	7	0	9	0	0	0	7	0	9
East	41	1585	52	0	5	0	0	0	12	12	88	0	12	88	12
South	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
West	26	827	0	0	20	4	15	0	0	0	142	0	15	142	0

APPROACH	E + G			SCENARIO 2 BACKGROUND E + G + A			SCENARIO 3 PROJECT E+G+A+P1			SCENARIO 4 CUMULATIVE E+G+A+P1+P2		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	17	0	9	17	0	9	17	0	9	24	0	18
East	41	1585	52	41	1590	52	53	1678	52	53	1678	64
South	0	0	0	0	0	0	0	0	0	0	0	0
West	26	827	0	26	847	4	26	989	4	41	989	4

INTERSECTION: Redwood/Stevens Creek
PEAK HOUR. PM Peak Hour
COUNT DATE 4/10/97
GROWTH
BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

APPROACH	SCENARIO 6 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNTF PROJECT TRIPS (P2)			TOTAL TRIPS (P3)		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	214	0	126	0	0	0	45	0	56	0	0	0	45	0	56
East	56	1373	214	114	82	0	0	0	45	25	220	0	25	220	45
South	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
West	143	1613	0	0	95	8	56	0	0	0	171	0	56	171	0

APPROACH	E + G			SCENARIO 7 BACKGROUND E + G + A			SCENARIO 8 PROJECT E+G+A+P1			SCENARIO 9 CUMULATIVE E+G+A+P1+P2		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	214	0	126	214	0	126	214	0	126	259	0	182
East	56	1373	214	170	1455	214	195	1675	214	195	1675	259
South	0	0	0	0	0	0	0	0	0	0	0	0
West	143	1613	0	143	1708	8	143	1879	8	199	1879	8

12/11/97

INTERSECTION: Stevens Creek/Redwood
PEAK HOUR: Saturday Peak Hour
COUNT DATE: 9/27/97
GROWTH
BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

	SCENARIO 6 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNT PROJECT TRIPS (P2)			TOTAL TRIPS (P4)		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	248	0	222	0	0	0	56	0	69	0	0	0	56	0	69
East	59	1541	238	114	82	0	0	0	56	25	223	0	25	223	56
South	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
West	207	1736	24	0	95	8	69	0	0	0	174	0	69	174	0

	E + G			SCENARIO 7 BACKGROUND E + G + A			SCENARIO 8 PROJECT E+G+A+P1			SCENARIO 9 CUMULATIVE E+G+A+P1+P2		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	248	0	222	248	0	222	248	0	222	304	0	291
East	59	1541	238	173	1623	238	198	1846	238	198	1846	294
South	0	0	0	0	0	0	0	0	0	0	0	0
West	207	1736	24	207	1831	32	207	2005	32	276	2005	32

97-036

12/11/97

INTERSECTION: Winchester/Stevens Creek
PEAK HOUR: AM Peak Hour
COUNT DATE: 4/16/97
GROWTH
BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

	SCENARIO 1 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNTF PROJECT TRIPS (P2)			TOTAL TRIPS (P3)		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	117	241	87	14	16	0	0	3	0	0	12	0	0	15	0
East	324	787	247	6	0	7	3	6	0	0	0	0	3	6	0
South	151	1071	260	2	4	10	0	5	6	68	5	0	68	10	6
West	145	474	136	0	0	4	0	9	0	0	0	38	0	9	38

	E + G			SCENARIO 2 BACKGROUND E + G + A			SCENARIO 3 PROJECT E+G+A+P1			SCENARIO 4 CUMULATIVE E+G+A+P1+P2		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	117	241	87	131	257	87	131	269	87	131	272	87
East	324	787	247	330	787	254	330	787	254	333	793	254
South	151	1071	260	153	1075	270	221	1080	270	221	1085	276
West	145	474	136	145	474	140	145	474	178	145	483	178

INTERSECTION: Winchester/Stevens Creek
PEAK HOUR: PM Peak Hour
COUNT DATE: 7/10/97
GROWTH
BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

	SCENARIO 6 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNTF PROJECT TRIPS (P2)			TOTAL TRIPS (P3)		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	306	940	191	68	4	0	0	18	0	0	33	0	0	51	0
East	572	882	204	10	0	76	19	37	0	0	0	0	19	37	0
South	267	517	439	4	12	35	0	18	19	69	33	0	69	51	19
West	252	1001	281	0	0	2	0	37	0	0	0	93	0	37	93

	E + G			SCENARIO 7 BACKGROUND E + G + A			SCENARIO 8 PROJECT E+G+A+P1			SCENARIO 9 CUMULATIVE E+G+A+P1+P2		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	306	940	191	374	944	191	374	977	191	374	995	191
East	572	882	204	582	882	280	582	882	280	601	919	280
South	267	517	439	271	529	474	340	562	474	340	580	493
West	252	1001	281	252	1001	283	252	1001	376	252	1038	376

97-036

12/11/97

INTERSECTION: Winchester/Stevens Creek
PEAK HOUR: Saturday Peak Hour
COUNT DATE: 7/19/97
GROWTH
BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

	SCENARIO 6 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNT PROJECT TRIPS (P2)			TOTAL TRIPS (P4)		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	276	716	277	68	4	0	0	22	0	0	34	0	0	56	0
East	554	1094	173	10	0	76	24	46	0	0	0	0	24	46	0
South	332	582	650	4	12	35	0	22	24	70	34	0	70	56	24
West	242	852	378	0	0	2	0	46	0	0	0	94	0	46	94

	E + G			SCENARIO 7 BACKGROUND E + G + A			SCENARIO 8 PROJECT E+G+A+P1			SCENARIO 9 CUMULATIVE E+G+A+P1+P2		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	276	716	277	344	720	277	344	754	277	344	776	277
East	554	1094	173	564	1094	249	564	1094	249	588	1140	249
South	332	582	650	336	594	685	406	628	685	406	650	709
West	242	852	378	242	852	380	242	852	474	242	898	474

97-036

INTERSECTION: Winchester/Tisch
PEAK HOUR: AM Peak Hour
COUNT DATE: 4/16/97
GROWTH
BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

	SCENARIO 1 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNTF PROJECT TRIPS (P2)			TOTAL TRIPS (P3)		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	55	352	166	0	26	7	0	3	3	0	4	108	0	7	111
East	40	16	17	34	0	0	0	0	0	0	0	0	0	0	0
South	531	1539	414	37	16	0	0	11	0	0	64	0	0	75	0
West	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	E + G			SCENARIO 2 BACKGROUND E + G + A			SCENARIO 3 PROJECT E+G+A+P1			SCENARIO 4 CUMULATIVE E+G+A+P1+P2		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	55	352	166	55	378	173	55	382	281	55	385	284
East	40	16	17	74	16	17	74	16	17	74	16	17
South	531	1539	414	568	1555	414	568	1619	414	568	1630	414
West	0	0	0	0	0	0	0	0	0	0	0	0

INTERSECTION: Winchester/Tisch
PEAK HOUR: PM Peak Hour
COUNT DATE: 4/16/97
GROWTH
BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

	SCENARIO 6 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNTF PROJECT TRIPS (P2)			TOTAL TRIPS (P3)		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	42	1259	305	0	16	5	0	19	18	0	30	83	0	49	101
East	306	91	49	57	0	0	0	0	0	0	0	0	0	0	0
South	333	1049	132	34	51	0	0	37	0	0	154	0	0	191	0
West	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	E + G			SCENARIO 7 BACKGROUND E + G + A			SCENARIO 8 PROJECT E+G+A+P1			SCENARIO 9 CUMULATIVE E+G+A+P1+P2		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	42	1259	305	42	1275	310	42	1305	393	42	1324	411
East	306	91	49	363	91	49	363	91	49	363	91	49
South	333	1049	132	367	1100	132	367	1254	132	367	1291	132
West	0	0	0	0	0	0	0	0	0	0	0	0

12/11/97

INTERSECTION: Winchester/Tisch
PEAK HOUR: Saturday Peak Hour
COUNT DATE: 10/4/97
GROWTH
BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

	SCENARIO 6 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNT PROJECT TRIPS (P2)			TOTAL TRIPS (P4)		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	25	1242	366	0	16	5	0	24	22	0	31	83	0	55	105
East	108	40	26	57	0	0	0	0	0	0	0	0	0	0	0
South	283	1374	148	34	51	0	0	46	0	0	155	0	0	201	0
West	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	E + G			SCENARIO 7 BACKGROUND E + G + A			SCENARIO 8 PROJECT E+G+A+P1			SCENARIO 9 CUMULATIVE E+G+A+P1+P2		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	25	1242	366	25	1258	371	25	1289	454	25	1313	476
East	108	40	26	165	40	26	165	40	26	165	40	26
South	283	1374	148	317	1425	148	317	1580	148	317	1626	148
West	0	0	0	0	0	0	0	0	0	0	0	0

97-036

12/11/97

INTERSECTION: Winchester/Williams
PEAK HOUR: AM Peak Hour
COUNT DATE: 4/16/97
GROWTH
BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

APPROACH	SCENARIO 1 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNTF PROJECT TRIPS (P2)			TOTAL TRIPS (P3)		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	53	569	74	0	0	0	1	1	0	1	1	1	2	2	1
East	68	100	61	0	0	0	0	0	1	0	0	1	0	0	2
South	83	1464	62	0	0	0	0	3	0	0	3	0	0	6	0
West	279	108	163	0	0	0	1	0	0	1	0	0	2	0	0

APPROACH	E + G			SCENARIO 2 BACKGROUND E + G + A			SCENARIO 3 PROJECT E+G+A+P1			SCENARIO 4 CUMULATIVE E+G+A+P1+P2		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	53	569	74	53	569	74	54	570	75	55	571	75
East	68	100	61	68	100	61	68	100	62	68	100	63
South	83	1464	62	83	1464	62	83	1467	62	83	1470	62
West	279	108	163	279	108	163	280	108	163	281	108	163

INTERSECTION: Winchester/Williams
PEAK HOUR: PM Peak Hour
COUNT DATE: 4/16/97
GROWTH
BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

APPROACH	SCENARIO 6 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNTF PROJECT TRIPS (P2)			TOTAL TRIPS (P3)		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	19	1306	192	0	0	0	4	8	3	5	9	5	9	17	8
East	65	59	10	0	0	0	0	0	4	0	0	5	0	0	9
South	118	905	23	0	0	0	0	8	0	0	9	0	0	17	0
West	177	68	125	0	0	0	3	0	0	5	0	0	8	0	0

APPROACH	E + G			SCENARIO 7 BACKGROUND E + G + A			SCENARIO 8 PROJECT E+G+A+P1			SCENARIO 9 CUMULATIVE E+G+A+P1+P2		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	19	1306	192	19	1306	192	24	1315	197	28	1323	200
East	65	59	10	65	59	10	65	59	15	65	59	19
South	118	905	23	118	905	23	118	914	23	118	922	23
West	177	68	125	177	68	125	182	68	125	185	68	125

INTERSECTION: Winchester/Olsen
PEAK HOUR: AM Peak Hour
COUNT DATE: 4/17/97
GROWTH
BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

APPROACH	SCENARIO 1 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNT PROJECT TRIPS (P2)			TOTAL TRIPS (P3)		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	5	494	9	0	26	0	0	4	0	5	2	0	5	6	0
East	18	0	8	0	0	0	0	0	0	110	0	3	110	0	3
South	64	1498	44	0	16	0	0	8	0	0	3	61	0	11	61
West	6	0	13	0	0	0	0	0	0	0	0	0	0	0	0

APPROACH	E + G			SCENARIO 2 BACKGROUND E + G + A			SCENARIO 3 PROJECT E+G+A+P1			SCENARIO 4 CUMULATIVE E+G+A+P1+P2		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	5	494	9	5	520	9	10	522	9	10	526	9
East	18	0	8	18	0	8	128	0	11	128	0	11
South	64	1498	44	64	1514	44	64	1517	105	64	1525	105
West	6	0	13	6	0	13	6	0	13	6	0	13

INTERSECTION: Winchester/Olsen
PEAK HOUR: PM Peak Hour
COUNT DATE: 4/17/97
GROWTH
BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

APPROACH	SCENARIO 6 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNT PROJECT TRIPS (P2)			TOTAL TRIPS (P3)		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	25	1441	39	0	16	0	0	26	0	16	12	0	16	38	0
East	86	7	48	0	0	0	0	0	0	101	0	16	101	0	16
South	87	949	101	0	51	0	0	26	0	0	12	142	0	38	142
West	33	3	23	0	0	0	0	0	0	0	0	0	0	0	0

APPROACH	E + G			SCENARIO 7 BACKGROUND E + G + A			SCENARIO 8 PROJECT E+G+A+P1			SCENARIO 9 CUMULATIVE E+G+A+P1+P2		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	25	1441	39	25	1457	39	41	1469	39	41	1495	39
East	86	7	48	86	7	48	187	7	64	187	7	64
South	87	949	101	87	1000	101	87	1012	243	87	1038	243
West	33	3	23	33	3	23	33	3	23	33	3	23

12/11/97

INTERSECTION: Winchester/Olsen
PEAK HOUR: Saturday Peak Hour
COUNT DATE: 10/4/97
GROWTH
BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

	SCENARIO 6 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNT PROJECT TRIPS (P2)			TOTAL TRIPS (P4)		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	78	1138	101	0	16	0	0	32	0	16	12	0	16	44	0
East	151	14	108	0	0	0	0	0	0	102	0	16	102	0	16
South	98	1208	154	0	51	0	0	32	0	0	12	143	0	44	143
West	76	23	236	0	0	0	0	0	0	0	0	0	0	0	0

	E + G			SCENARIO 7 BACKGROUND E + G + A			SCENARIO 8 PROJECT E+G+A+P1			SCENARIO 9 CUMULATIVE E+G+A+P1+P2		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	78	1138	101	78	1154	101	94	1166	101	94	1198	101
East	151	14	108	151	14	108	253	14	124	253	14	124
South	98	1208	154	98	1259	154	98	1271	297	98	1303	297
West	76	23	236	76	23	236	76	23	236	76	23	236

12/11/97

INTERSECTION: Winchester/Olin
PEAK HOUR: AM Peak Hour
COUNT DATE: 4/16/97
GROWTH
BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

	SCENARIO 1 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNT PROJECT TRIPS (P2)			TOTAL TRIPS (P3)		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	43	513	8	0	26	0	0	4	0	45	5	0	45	9	0
East	4	1	12	0	0	0	0	0	0	2	0	70	2	0	70
South	11	1436	36	0	16	0	0	8	0	0	3	3	0	11	3
West	12	0	17	0	0	0	0	0	0	0	0	0	0	0	0

	E + G			SCENARIO 2 BACKGROUND E + G + A			SCENARIO 3 PROJECT E+G+A+P1			SCENARIO 4 CUMULATIVE E+G+A+P1+P2		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	43	513	8	43	539	8	88	544	8	88	548	8
East	4	1	12	4	1	12	6	1	82	6	1	82
South	11	1436	36	11	1452	36	11	1455	39	11	1463	39
West	12	0	17	12	0	17	12	0	17	12	0	17

INTERSECTION: Winchester/Olin
PEAK HOUR: PM Peak Hour
COUNT DATE: 4/16/97
GROWTH
BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

	SCENARIO 6 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNT PROJECT TRIPS (P2)			TOTAL TRIPS (P3)		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	114	1410	40	0	16	0	0	26	0	110	16	0	110	42	0
East	56	1	25	0	0	0	0	0	0	12	0	86	12	0	86
South	22	925	51	0	51	0	0	26	0	0	16	12	0	42	12
West	22	3	29	0	0	0	0	0	0	0	0	0	0	0	0

	E + G			SCENARIO 7 BACKGROUND E + G + A			SCENARIO 8 PROJECT E+G+A+P1			SCENARIO 9 CUMULATIVE E+G+A+P1+P2		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	114	1410	40	114	1426	40	224	1442	40	224	1468	40
East	56	1	25	56	1	25	68	1	111	68	1	111
South	22	925	51	22	976	51	22	992	63	22	1018	63
West	22	3	29	22	3	29	22	3	29	22	3	29

12/11/97

INTERSECTION: Winchester/Olin
PEAK HOUR: Saturday Peak Hour
COUNT DATE: 9/27/97
GROWTH
BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

	SCENARIO 6 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNT PROJECT TRIPS (P2)			TOTAL TRIPS (P4)		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	177	1051	37	0	16	0	0	32	0	111	16	0	111	48	0
East	116	9	88	0	0	0	0	0	0	12	0	87	12	0	87
South	30	1221	77	0	51	0	0	32	0	0	16	12	0	48	12
West	46	9	43	0	0	0	0	0	0	0	0	0	0	0	0

	E + G			SCENARIO 7 BACKGROUND E + G + A			SCENARIO 8 PROJECT E+G+A+P1			SCENARIO 9 CUMULATIVE E+G+A+P1+P2		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	177	1051	37	177	1067	37	288	1083	37	288	1115	37
East	116	9	88	116	9	88	128	9	175	128	9	175
South	30	1221	77	30	1272	77	30	1288	89	30	1320	89
West	46	9	43	46	9	43	46	9	43	46	9	43

97-036

Appendices

Appendix B

Traffic Counts

```
TOWN & COUNTRY                                                              SUM-IT
ED/CLEAR                                                                COUNT DATE
.HOLMES/D.COOMBS                                                           /09/97

 1 - I280 OFFRAMP/MOORPARK                                            MORNING PEAK
==================================================================================

                                : 769/0.90          :
                                :                   :  N/S Street:
      Hour Ending: 08:30a       : 13                :  I280 OFFRAMP
                                : : 0             0 :
                                : :  :  756         :
                                : :  :  .           :
                                : :  :              :
                 ---------------+ :  .             A +---------------
                      480      ---+     ---->      +--------    :
                                     V          <---------  467     467/0.91
                                  A             +--------    :
                         0 --------+             V
         507/0.86     507 --------->           A
                         0 --------+     <---+  :  +--->   1263
                 ---------------+ V          :  :  : +---------------
                                :            :  :  :  :  E/W Street:
                                :            :  :  :  :  MOORPARK
        Intersection            :            0  :  :  :
       ===============          :   0           0  :  :
       Total Vol: 1743          :                  0  :
       PH Factor: 0.90          :                     :
                                :             0/0.00  :

==================================================================================

 1 - I280 OFFRAMP/MOORPARK                                            EVENING PEAK
==================================================================================

                                : 932/0.93          :
                                :                   :  N/S Street:
      Hour Ending: 06:00p       : 81                :  I280 OFFRAMP
                                : : 0             0 :
                                : :  :  851         :
                                : :  :  :           :
                                : :  :  :           :
                 ---------------+ :  :  :          A +---------------
                      588    <---+  :  +--->      +--------  0
                                     V          <---------  507     507/0.84
                                  A             +--------   0
                         0 --------+             V
         737/0.98     737 --------->           A
                         0 --------+     <---+  :  +--->   1588
                 ---------------+ V          :  :  : +---------------
                                :            :  :  :  :  E/W Street:
                                :            :  :  :  :  MOORPARK
        Intersection            :            0  :  :  :
       ===============          :   0           0  :  :
       Total Vol: 2176          :                  0  :
       PH Factor: 0.96          :                     :
                                :             0/0.00  :

==================================================================================
```

97-036

```
OWN & COUNTRY                                                         SUM-I
UE/CLEAR                                                         COUNT DATE
.SUNDBERG/N.HALEY                                                   4/15/9

 - I880 OFFRAMP/STEVENS CREEK                                   MORNING PEA
================================================================================

                               : 426/0.76         :
                               :                  :  N/S Street:
      Hour Ending: 09:00a      : 426              :  I880 OFFRAMP
                               : :  0           0 :
                               : :  :  0          :
                               : :  :  :          :
                               : :  :  :          :
                ---------------  :  :  :        A +---------------
                     1460     ---+  :  +--->      +-------    )
                                    V            <--------- 1034    1034/0.77
                                 A                +-------    :
                        0 -------+                v
         606/0.89     606 ---------->           A
                        0 -------+     <---+   :  +--->    606
                ---------------+ V          :  :  : +--------------
                               :            :  :  : :  E/W Street:
                               :            :  :  : :  STEVENS CREEK
        Intersection           :            0  :  : :
      ===============          :   0           0  : :
      Total Vol: 2066          :                  0 :
      PK Factor: 0.86          :                    :
                               :            0/0.00  :

================================================================================
```

97-036

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT:		BARTON-ASCHMAN ASSOCIATES
PROJECT:		TOWN AND COUNTRY TIA
DATE:		THURSDAY APRIL 17, 1997
PERIOD:		7:00 A.M. TO 9:00 A.M.
INTERSECTION:	N/S	BASCOM AVENUE
	E/W	MOORPARK AVENUE

15 MIN COUNTS

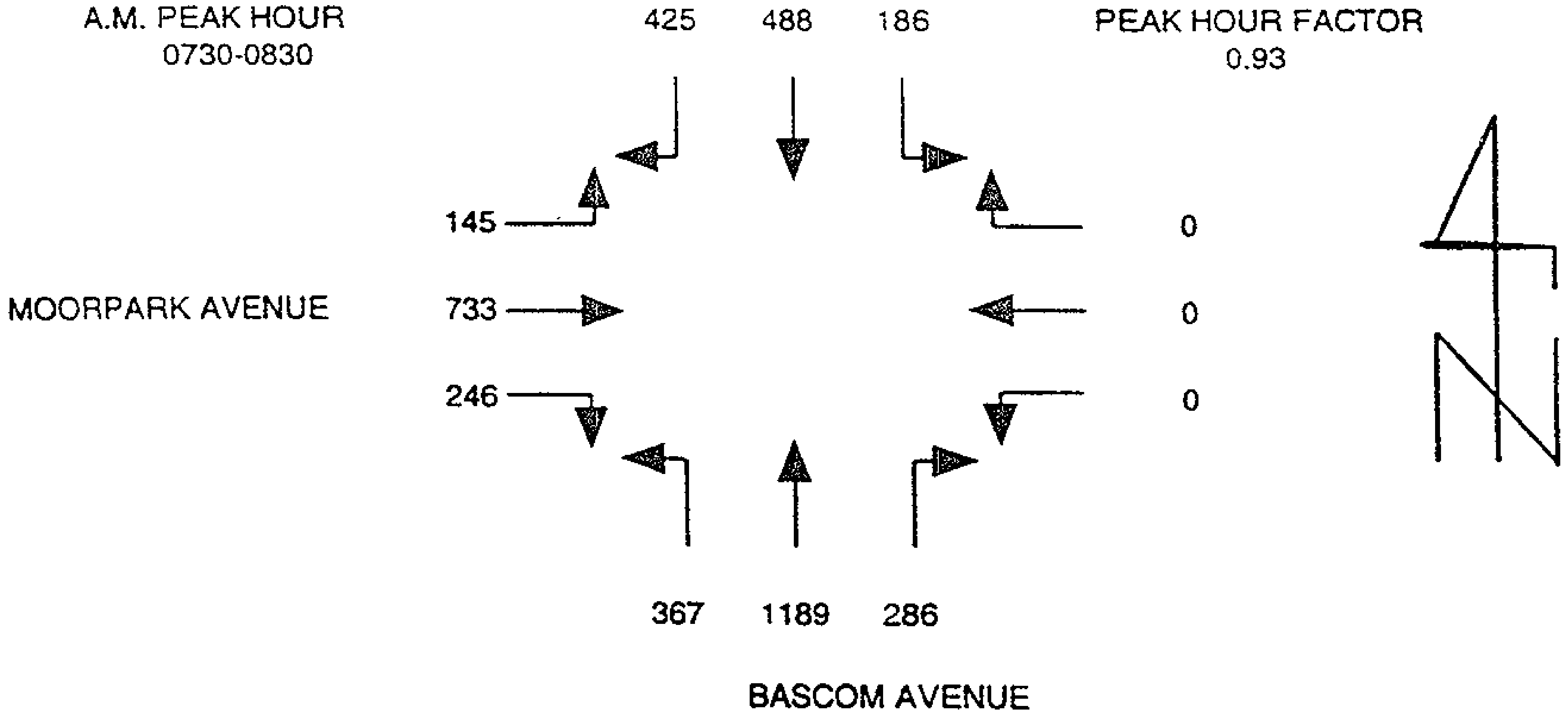
	1	2	3	4	5	6	7	8	9	10	11	12
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT
700-715	76	100	32	0	0	0	50	175	53	35	105	25
715-730	81	108	36	0	0	0	59	275	88	51	149	33
730-745	98	123	52	0	0	0	79	319	99	73	159	29
745-800	100	106	49	0	0	0	83	318	80	56	191	34
800-815	107	138	52	0	0	0	70	307	105	63	206	39
815-830	120	121	33	0	0	0	54	245	83	54	177	43
830-845	101	134	50	0	0	0	72	211	90	68	164	25
845-900	93	128	48	0	0	0	61	219	84	84	163	27

HOUR TOTALS

	1	2	3	4	5	6	7	8	9	10	11	12	
TIME	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
0700-0800	355	437	169	0	0	0	271	1087	320	215	604	121	3579
0715-0815	386	475	189	0	0	0	291	1219	372	243	705	135	4015
0730-0830	425	488	186	0	0	0	286	1189	367	246	733	145	4065
0745-0845	428	499	184	0	0	0	279	1081	358	241	738	141	3949
0800-0900	421	521	183	0	0	0	257	982	362	269	710	134	3839

A.M. PEAK HOUR
0730-0830

PEAK HOUR FACTOR
0.93



97-036

WILTEC

(510) 932-8186

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

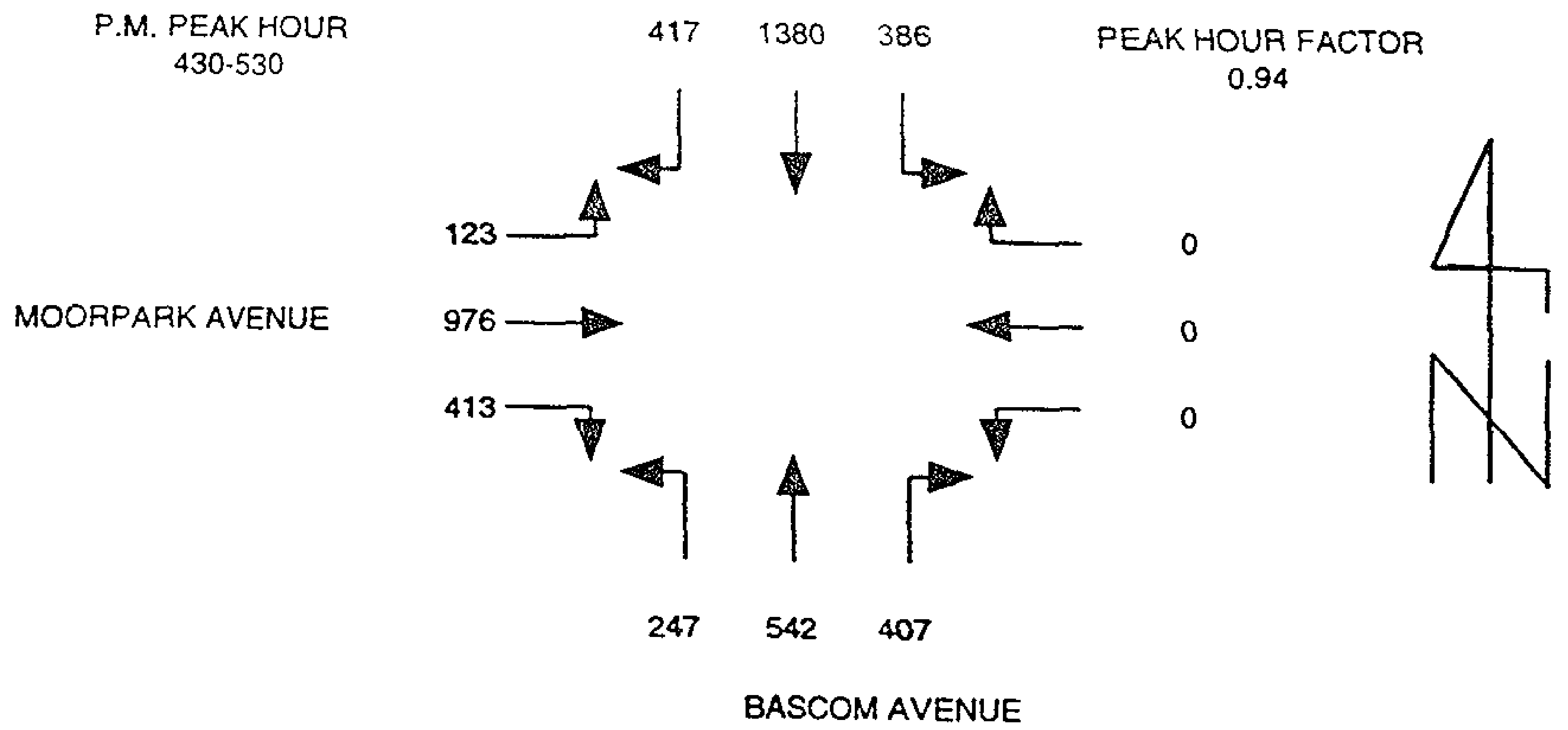
CLIENT:		BARTON-ASCHMAN ASSOCIATES
PROJECT:		TOWN AND COUNTRY TIA
DATE:		THURSDAY APRIL 17, 1997
PERIOD:		4:00 P.M. TO 6:00 P.M.
INTERSECTION:	N/S	BASCOM AVENUE
	E/W	MOORPARK AVENUE

15 MIN COUNTS

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT
400-415	104	245	95	0	0	0	99	139	64	96	219	43
415-430	92	253	89	0	0	0	84	121	59	84	205	34
430-445	97	296	97	0	0	0	92	157	51	99	249	37
445-500	107	324	82	0	0	0	105	139	59	105	220	32
500-515	98	369	97	0	0	0	120	130	67	96	240	22
515-530	115	391	110	0	0	0	90	116	70	113	267	32
530-545	88	334	83	0	0	0	77	114	53	101	218	20
545-600	83	257	90	0	0	0	70	103	56	108	205	25

HOUR TOTALS

TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-500	400	1118	363	0	0	0	380	556	233	384	893	146	4473
415-515	394	1242	365	0	0	0	401	547	236	384	914	125	4608
430-530	417	1380	386	0	0	0	407	542	247	413	976	123	4891
445-545	408	1418	372	0	0	0	392	499	249	415	945	106	4804
500-600	384	1351	380	0	0	0	357	463	246	418	930	99	4628



```
TOWN & COUNTRY                                                      SUM-IT
THURS/CLEAR                                                     COUNT DATE
D.COOMBS/D.HOLMES                                                  4/17/97

1 - BASCOM/NAGLEE                                             EVENING PEAK
===========================================================================

                        | 1409/0.79      |
                        |                |  N/S Street:
     Hour Ending: 06:00p| 110            |  BASCOM
                        | |  1165     567|
                        | |  |  134      |
                        | |  |  |        |
                        | |  |  |        |
          --------------+ |  |  |      A +---------------
               535    ---+   |  +--->   +-------  55
                             V         <---------  308     555/0.91
                          A             +-------  192
               110 -------+             V
   451/0.82    302 --------->        A
                39 -------+    <---+ |  +--->     596
          --------------+ V        : |  | +---------------
                        |          : |  | |  E/W Street:
                        |          : |  | |  NAGLEE
    Intersection        |       117  |  | |
    ===============     |1396     402   | |
    Total Vol: 3094     |           160 |
    PH Factor: 0.84     |               |
                        |     679/0.90  |

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97-036

```
TOWN & COUNTRY                                                              SUM-IT
ES/CLEAR                                                                COUNT DATE
.HOLMES/D.COOMBS                                                           4/15/97

1 - BASCOM/SAN CARLOS                                                 MORNING PEAK
==================================================================================

                                | 450/0.91          |
                                |                   |  N/S Street:
      Hour Ending: 08:30a       | 22                |  BASCOM
                                | |  344      1956  |
                                | |  |  84          |
                                | |  |  |           |
                 ---------------+ |  |  |         A +---------------
                     1090      ---+  .  ----.      +-------  351
                                     V          <---------  791     1267/0.80
                                  A                +-------  125
                       125 -------+                V
         451/0.81      250 --------->          A
                        76 -------+     <---+  |  +---.      470
                 ---------------+ V         |  |  | +-------------
                                |           |  |  | |  E/W Street:
                                |           |  |  | |  SAN CARLOS
        Intersection            |         277  |  | |
       ===============          | 545     1480 |  | |
       Total Vol: 4061          |              136  |
       PH Factor: 0.88          |                   |
                                |        1893/0.95  |

==================================================================================

1 - BASCOM/SAN CARLOS                                                 EVENING PEAK
==================================================================================

                                | 1564/0.95         |
                                |                   |  N/S Street:
      Hour Ending: 06:00p       | 71                |  BASCOM
                                | |  1221      632  |
                                | |  |  272         |
                                | |  |  |           |
                 ---------------+ |  |  |         A +---------------
                       735     <---+ |  +--->      +-------  58
                                     V          <---------  502     794/0.92
                                  A                +-------  234
                        94 -------+                V
         1015/0.91     708 --------->          A
                       213 -------+     <---+  |  +--->      1171
                 ---------------+ V         |  |  | +-------------
                                |           |  |  | |  E/W Street:
                                |           |  |  | |  SAN CARLOS
        Intersection            |         162  |  | |
       ===============          |1668          480  | |
       Total Vol: 4206          |              191  |
       PH Factor: 0.97          |                   |
                                |        833/0.87   |

==================================================================================
```

97-036

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

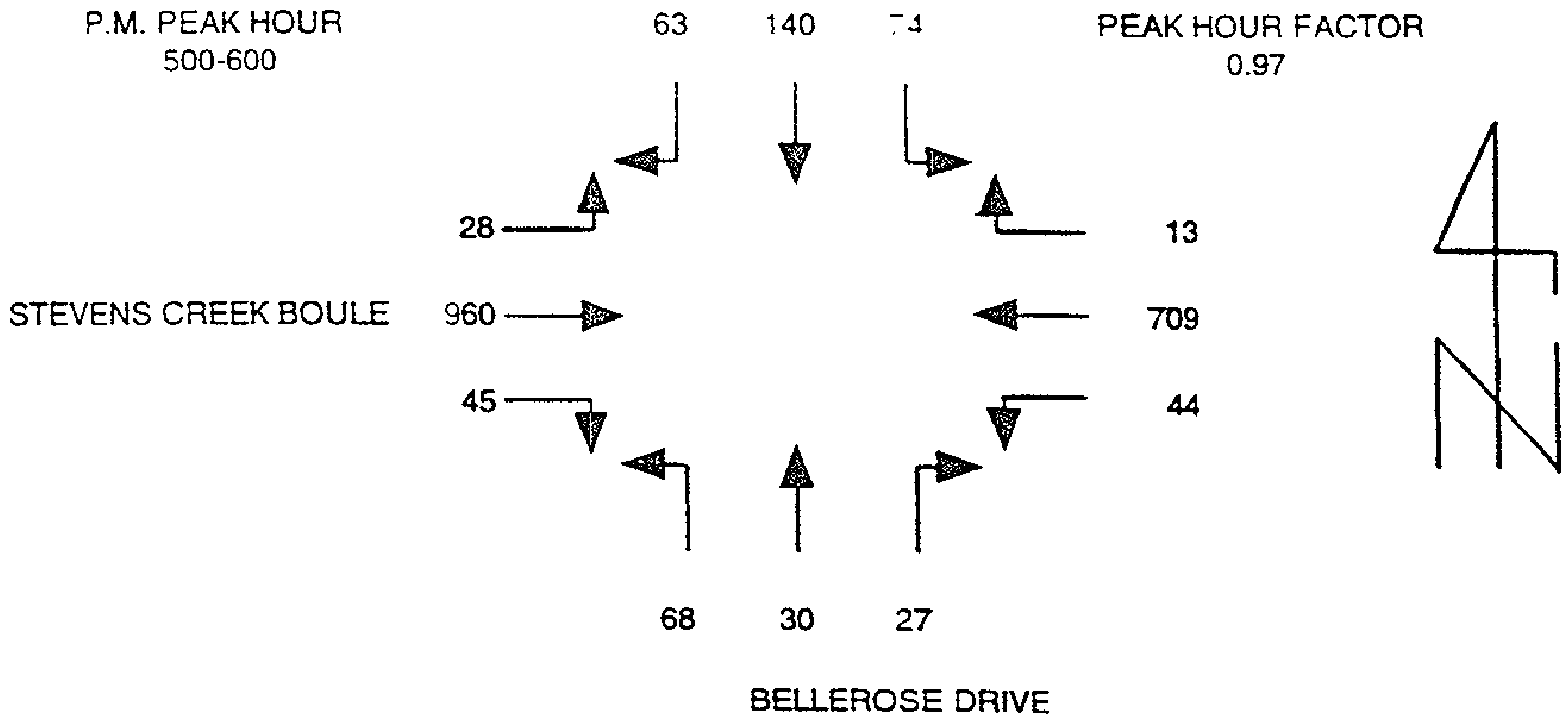
CLIENT.		BARTON-ASCHMAN ASSOCIATES
PROJECT.		TOWN AND COUNTRY TIA
DATE:		THURSDAY APRIL 17. 1997
PERIOD:		4:00 P.M. TO 6:00 P.M.
INTERSECTION:	N/S	BELLEROSE DRIVE
	E/W	STEVENS CREEK BOULEVARD

15 MIN COUNTS

	1	2	3	4	5	6	7	8	9	10	11	12
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT
400-415	15	25	11	7	132	7	5	8	16	9	202	11
415-430	10	17	9	7	179	12	1	4	13	13	223	12
430-445	14	25	16	2	168	10	2	6	24	11	206	7
445-500	15	29	15	5	197	15	5	7	14	13	210	5
500-515	18	40	19	3	188	7	3	6	22	14	230	4
515-530	22	37	21	5	150	8	7	7	17	8	237	9
530-545	13	33	13	3	184	16	3	9	18	13	252	8
545-600	10	30	21	2	187	13	4	8	11	10	241	7

HOUR TOTALS

	1	2	3	4	5	6	7	8	9	10	11	12	
TIME	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
400-500	54	96	51	21	676	44	13	25	67	46	841	35	1969
415-515	57	111	59	17	732	44	16	23	73	51	869	28	2080
430-530	69	131	71	15	703	40	22	26	77	46	883	25	2108
445-545	68	139	68	16	719	46	28	29	71	48	929	26	2187
500-600	63	140	74	13	709	44	27	30	68	45	960	28	2201



INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: BARTON-ASCHMAN ASSOCIATES
PROJECT: TOWN AND COUNTRY TIA
DATE: THURSDAY APRIL 17, 1997
PERIOD: 7:00 A.M. TO 9:00 A.M.
INTERSECTION: N/S WINCHESTER BOULEVARD
E/W E. HAMILTON AVENUE

15 MIN COUNTS

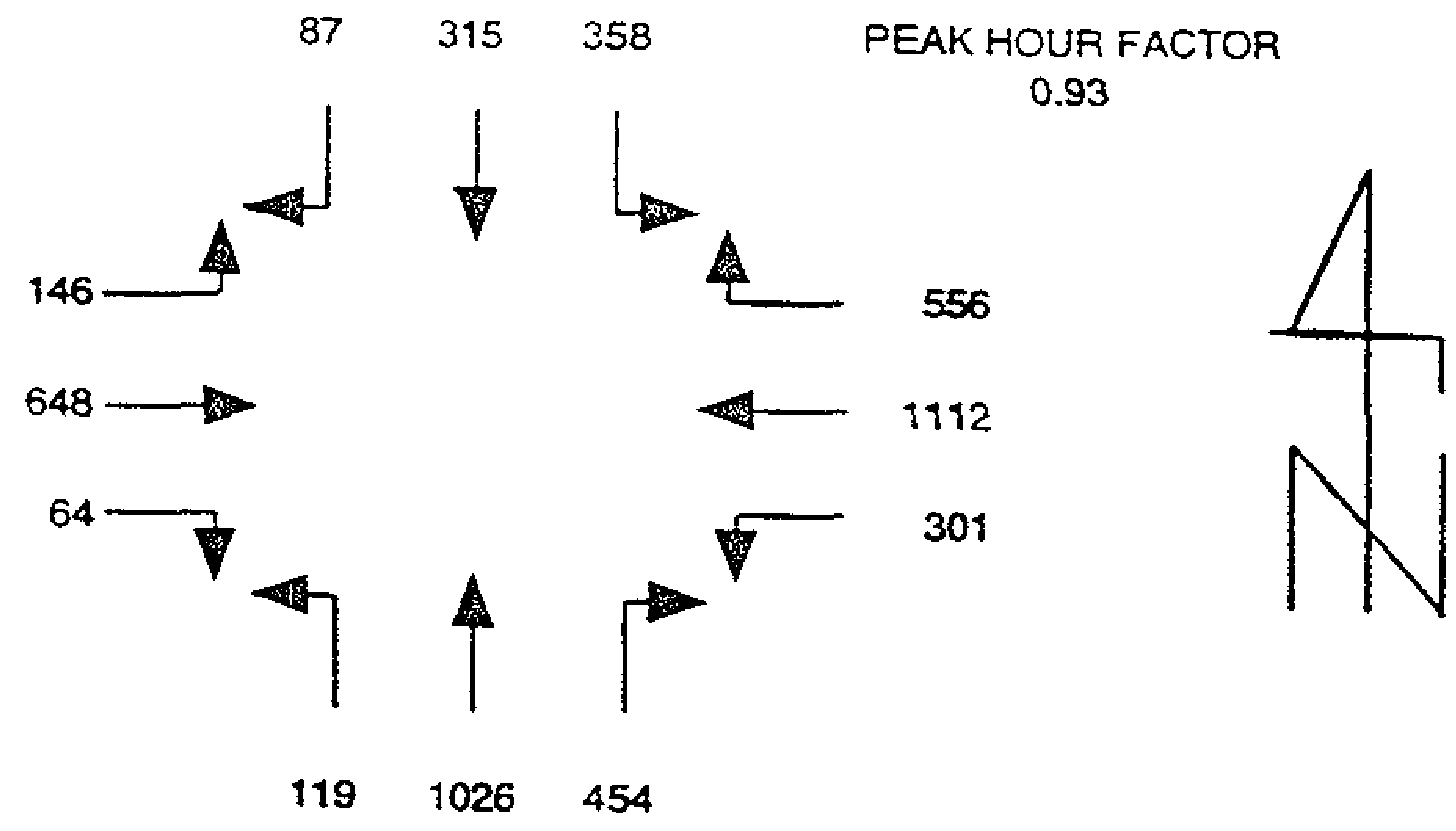
PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT
700-715	11	45	78	91	222	33	67	185	21	5	152	23
715-730	12	53	76	120	247	37	85	192	17	11	132	18
730-745	21	66	81	129	303	58	125	236	26	10	147	29
745-800	19	88	92	134	300	70	113	252	29	17	152	41
800-815	29	80	80	157	266	82	124	297	37	19	175	43
815-830	18	81	105	136	243	91	92	241	27	18	174	33
830-845	16	79	110	108	227	78	90	210	26	8	160	31
845-900	26	92	102	135	263	79	84	203	24	12	180	27

HOUR TOTALS

TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
0700-0800	63	252	327	474	1072	198	390	865	93	43	583	111	4471
0715-0815	81	287	329	540	1116	247	447	977	109	57	606	131	4927
0730-0830	87	315	358	556	1112	301	454	1026	119	64	648	146	5186
0745-0845	82	328	387	535	1036	321	419	1000	119	62	661	148	5098
0800-0900	89	332	397	536	999	330	390	951	114	57	689	134	5018

A.M. PEAK HOUR
0730-0830

PEAK HOUR FACTOR
0.93



E. HAMILTON AVENUE

WINCHESTER BOULEVARD

WILTEC

(510) 932-8186

97-036

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: BARTON-ASCHMAN ASSOCIATES
PROJECT. TOWN AND COUNTRY TIA
DATE: THURSDAY APRIL 17, 1997
PERIOD: 4:00 P.M. TO 6:00 P.M.
INTERSECTION: N/S WINCHESTER BOULEVARD
E/W E. HAMILTON AVENUE

15 MIN COUNTS

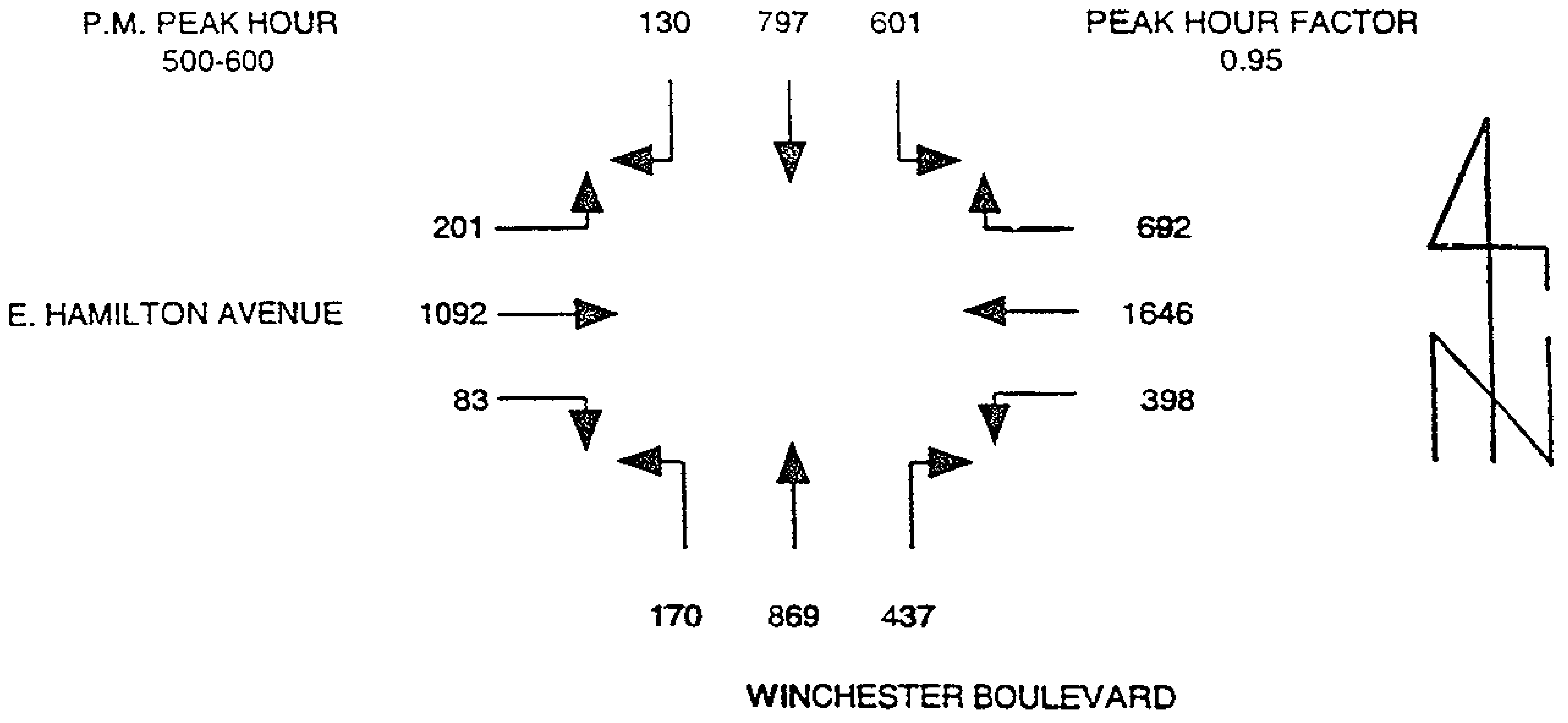
PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT
400-415	40	168	144	170	316	111	126	181	47	24	244	50
415-430	35	157	138	154	302	93	111	172	46	18	234	39
430-445	33	175	125	151	310	97	126	198	55	12	223	41
445-500	34	149	134	165	350	101	101	190	37	19	240	46
500-515	32	191	146	187	370	85	140	208	49	15	260	45
515-530	36	228	173	170	420	106	114	215	53	25	281	47
530-545	35	192	149	161	469	118	103	240	43	24	259	51
545-600	27	186	133	174	387	89	80	206	25	19	292	58

HOUR TOTALS

TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-500	142	649	541	640	1278	402	464	741	185	73	941	176	6232
415-515	134	672	543	657	1332	376	478	768	187	64	957	171	6339
430-530	135	743	578	673	1450	389	481	811	194	71	1004	179	6708
445-545	137	760	602	683	1609	410	458	853	182	83	1040	189	7006
500-600	130	797	601	692	1646	398	437	869	170	83	1092	201	7116

P.M. PEAK HOUR
500-600

PEAK HOUR FACTOR
0.95



WILTEC 97-036 (510) 932-8186

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT:		BARTON-ASCHMAN ASSOCIATES
PROJECT:		TOWN AND COUNTRY TIA
DATE:		THURSDAY APRIL 17, 1997
PERIOD:		7:00 A.M. TO 9:00 A.M.
INTERSECTION:	N/S	N. MONROE STREET
	E/W	W. HEDDING STREET

15 MIN COUNTS

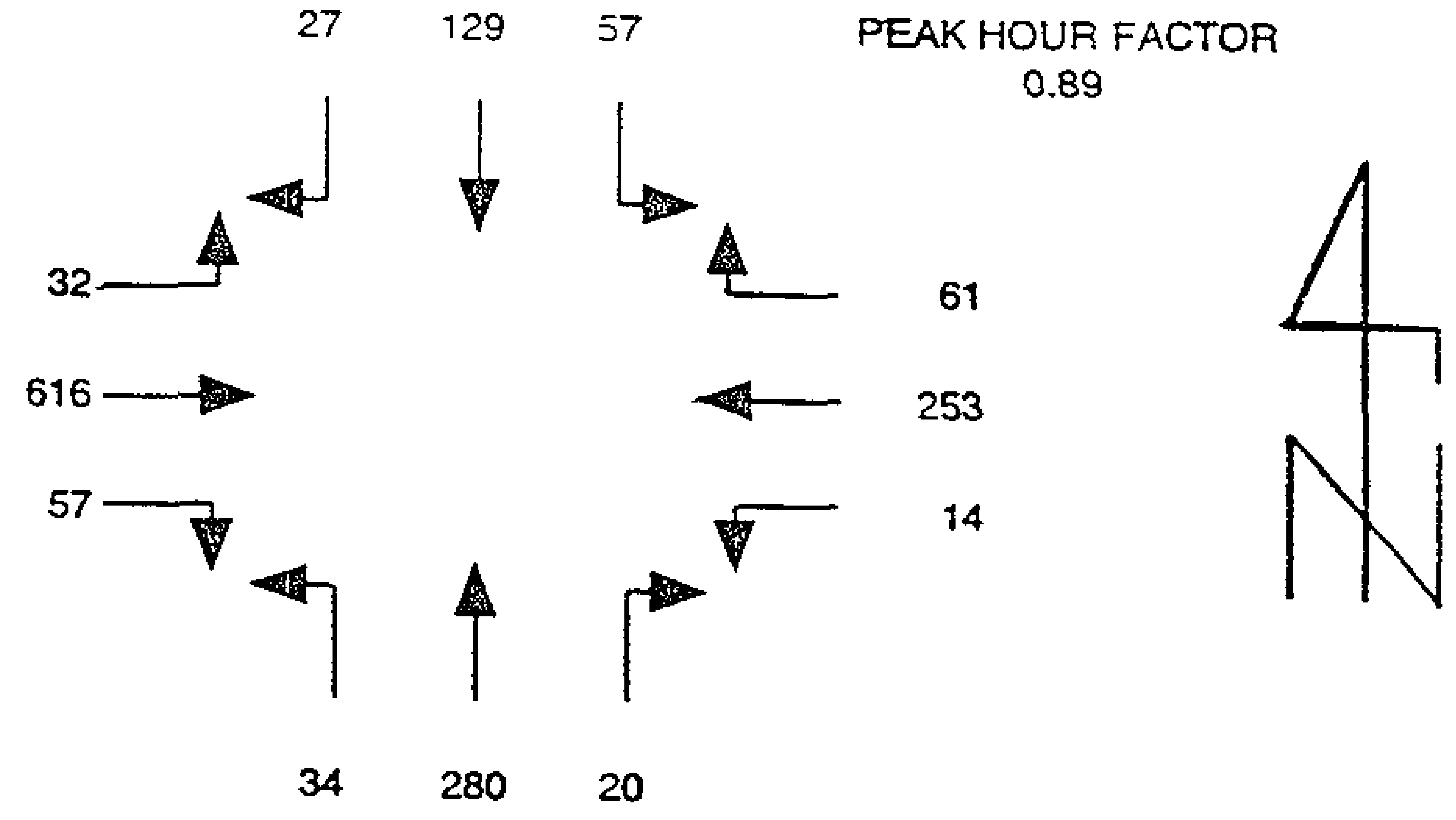
PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT
700-715	3	21	10	15	43	1	3	59	7	5	101	10
715-730	4	25	12	14	48	3	3	65	9	7	110	8
730-745	5	29	8	18	53	4	8	75	9	8	139	10
745-800	8	25	17	14	71	5	9	85	14	16	173	5
800-815	6	42	7	10	48	3	2	71	6	13	179	8
815-830	8	32	13	21	66	2	4	58	5	9	125	9
830-845	5	29	20	16	68	4	5	66	9	19	139	10
845-900	6	38	14	18	32	8	3	53	4	9	99	11

HOUR TOTALS

TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
0700-0800	20	101	47	61	215	13	23	284	39	36	523	33	1395
0715-0815	23	122	44	56	220	15	22	296	38	44	601	31	1512
0730-0830	27	129	45	63	238	14	23	289	34	46	616	32	1556
0745-0845	27	129	57	61	253	14	20	280	34	57	616	32	1580
0800-0900	25	141	54	65	214	17	14	248	24	50	542	38	1432

A.M. PEAK HOUR
0745-0845

PEAK HOUR FACTOR
0.89



W. HEDDING STREET

N. MONROE STREET

WILTEC

97-036

(510) 932-8186

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: BARTON-ASCHMAN ASSOCIATES
PROJECT: TOWN AND COUNTRY TIA
DATE: THURSDAY APRIL 17, 1997
PERIOD: 4:00 P.M. TO 6:00 P.M.
INTERSECTION: N/S N. MONROE STREET
E/W W. HEDDING STREET

15 MIN COUNTS

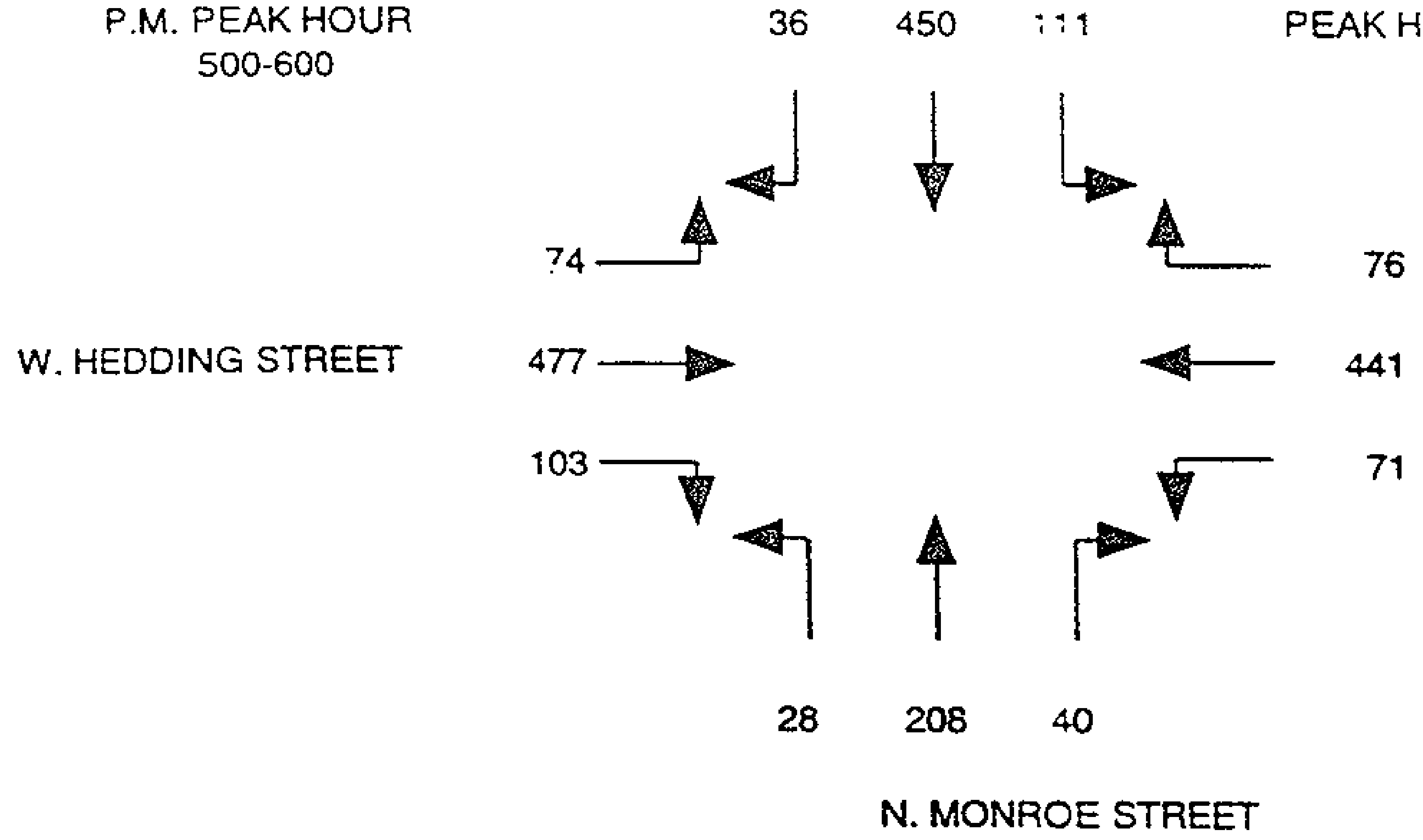
	1	2	3	4	5	6	7	8	9	10	11	12
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT
400-415	9	52	14	19	76	13	4	34	8	16	81	10
415-430	7	58	23	20	81	19	7	34	5	18	90	13
430-445	13	75	21	19	89	14	11	37	14	20	102	22
445-500	7	91	23	19	101	20	4	55	9	15	108	22
500-515	7	100	27	14	116	22	10	50	5	25	107	18
515-530	12	131	19	26	122	11	7	55	10	32	137	17
530-545	8	114	30	14	100	21	9	45	6	21	124	20
545-600	9	105	35	22	103	17	14	58	7	25	109	19

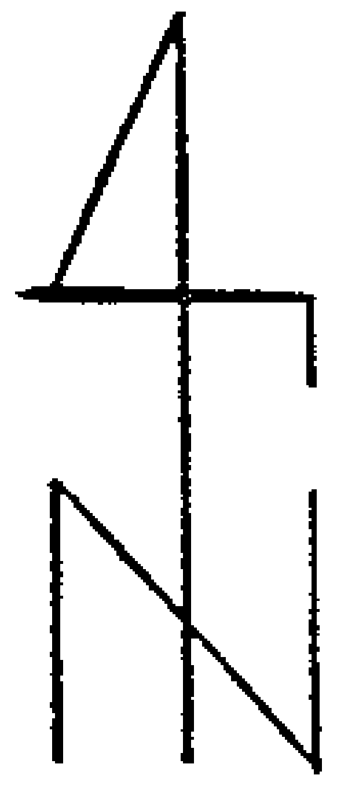
HOUR TOTALS

	1	2	3	4	5	6	7	8	9	10	11	12	
TIME	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
400-500	36	276	81	77	347	66	26	160	36	69	381	67	1622
415-515	34	324	94	72	387	75	32	176	33	78	407	75	1787
430-530	39	397	90	78	428	67	32	197	38	92	454	79	1991
445-545	34	436	99	73	439	74	30	205	30	93	476	77	2066
500-600	36	450	111	76	441	71	40	208	28	103	477	74	2115

P.M. PEAK HOUR
500-600

PEAK HOUR FACTOR
0.91





WILTEC

97-036

(510) 932-8186

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT:		BARTON-ASCHMAN ASSOCIATES
PROJECT.		TOWN AND COUNTRY TIA
DATE:		THURSDAY APRIL 17, 1997
PERIOD:		7:00 A.M. TO 9:00 A.M.
INTERSECTION:	N/S	WESTCHESTER BOULEVARD
	E/W	W. HEDDING STREET

15 MIN COUNTS

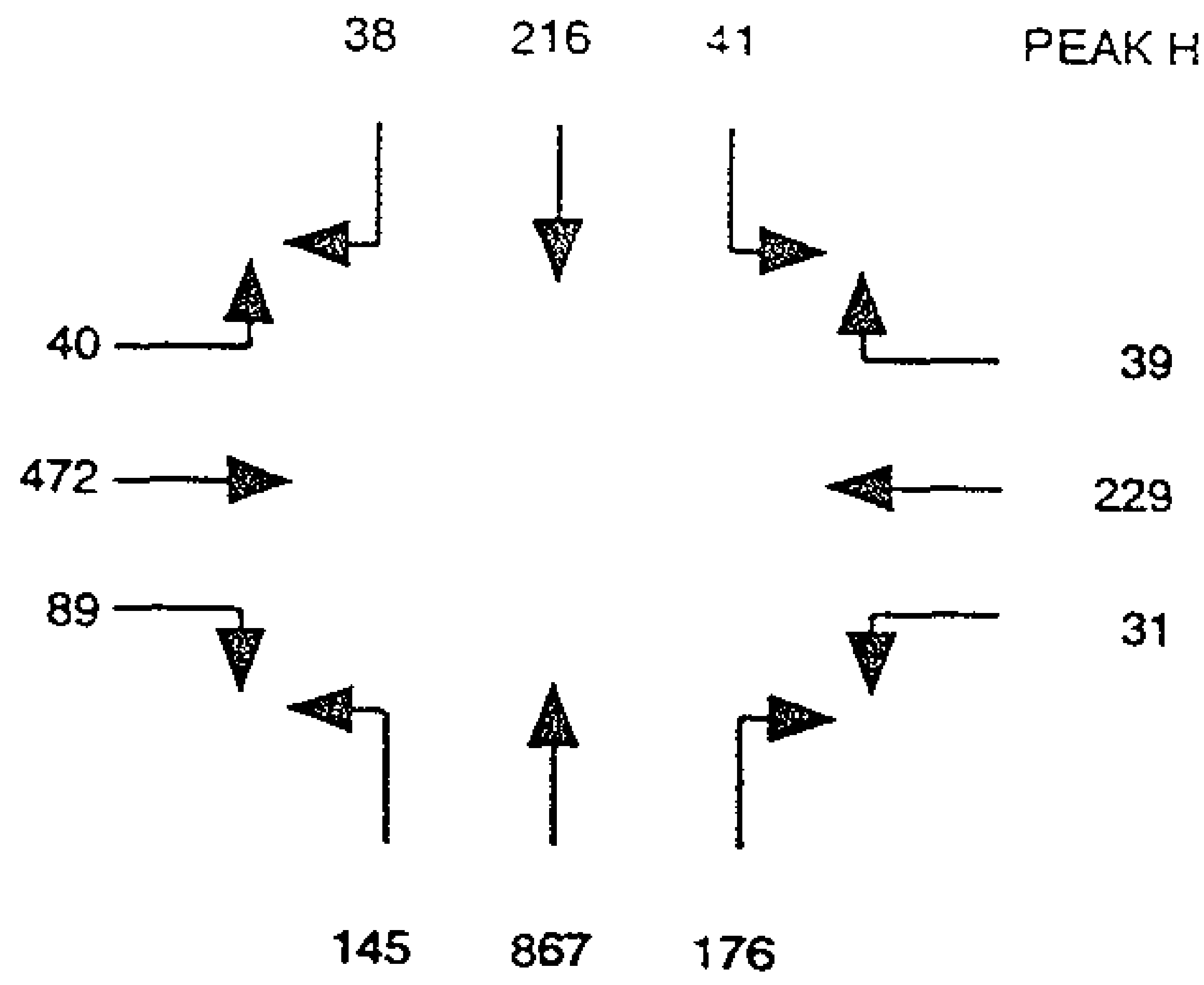
PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT
700-715	4	39	6	7	29	7	24	167	21	18	83	6
715-730	14	47	11	8	47	9	38	195	30	27	91	4
730-745	10	46	8	12	38	13	55	203	22	16	97	10
745-800	8	38	6	8	57	3	49	265	34	16	106	11
800-815	7	56	14	7	71	10	49	209	37	28	132	8
815-830	15	49	11	11	67	9	32	221	37	19	115	14
830-845	8	73	10	13	34	9	46	172	37	26	119	7
845-900	8	57	11	11	46	17	28	112	33	28	78	9

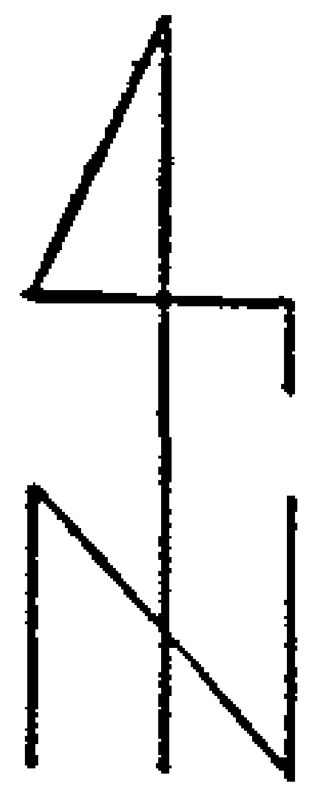
HOUR TOTALS

TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
0700-0800	36	170	31	35	171	32	166	830	107	77	377	31	2063
0715-0815	39	187	39	35	213	35	191	872	123	87	426	33	2280
0730-0830	40	189	39	38	233	35	185	898	130	79	450	43	2359
0745-0845	38	216	41	39	229	31	176	867	145	89	472	40	2383
0800-0900	38	235	46	42	218	45	155	714	144	101	444	38	2220

A.M. PEAK HOUR
0745-0845

PEAK HOUR FACTOR
0.95





W. HEDDING STREET

WESTCHESTER BOULEVARD

97-036

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

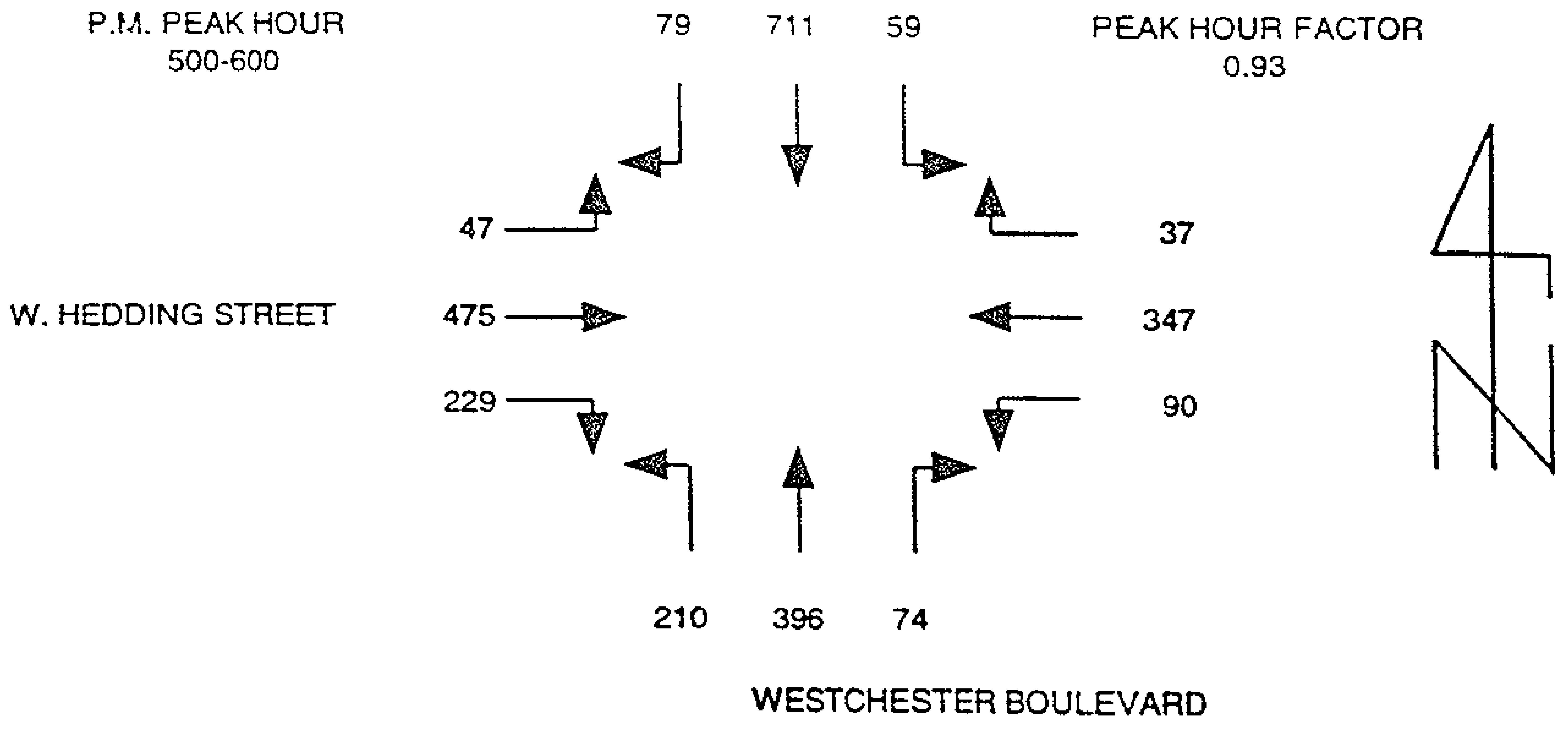
CLIENT:		BARTON-ASCHMAN ASSOCIATES
PROJECT:		TOWN AND COUNTRY TIA
DATE:		THURSDAY APRIL 17, 1997
PERIOD:		4:00 P.M. TO 6:00 P.M.
INTERSECTION:	N/S	WESTCHESTER BOULEVARD
	E/W	W. HEDDING STREET

15 MIN COUNTS

PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT
400-415	22	115	11	17	87	21	24	85	51	52	90	8
415-430	14	139	14	3	69	23	22	81	44	36	89	9
430-445	22	145	10	8	94	19	29	99	59	54	109	13
445-500	10	140	12	8	82	22	20	87	37	45	93	8
500-515	13	166	19	10	99	24	13	106	51	51	118	11
515-530	24	191	14	7	79	31	17	89	67	67	139	17
530-545	21	179	18	15	83	21	15	112	41	56	120	8
545-600	21	175	8	5	86	14	29	89	51	55	98	11

HOUR TOTALS

TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
400-500	68	539	47	36	332	85	95	352	191	187	381	38	2351
415-515	59	590	55	29	344	88	84	373	191	186	409	41	2449
430-530	69	642	55	33	354	96	79	381	214	217	459	49	2648
445-545	68	676	63	40	343	98	65	394	196	219	470	44	2676
500-600	79	711	59	37	347	90	74	396	210	229	475	47	2754



WILTEC

(510) 932-8186

97-036

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TOWN & COUNTRY                                                        SUM-II
WED/CLEAR                                                         COUNT DATE
J.REILLEY/K.REILLEY                                                  4/09/97

1 - MONROE/STEVENS CREEK                                        MORNING PEAK
============================================================================

                             : 85/0.66          :
                             :                  :  N/S Street:
      Hour Ending: 07:00a    : 15               :  MONROE
                             : :  9       225   :
                             : :  :  61         :
                             : :  :  :          :
                             : :  :  :          :
           ------------------+ :  :  :        A +---------------
              1732       ---+  :  +----       +--------  177
                                  V          <---------  1689   2261/0.95
                               A              +--------  395
                         25 --------+                 V
        815/0.92        761 ---------->          A
                         27 --------+     <---+  :  +--->    1002
           ------------------+ V              :  :  : +---------------
                             :                :  :  : :  E/W Street:
                             :                :  :  : :  STEVENS CREEK
       Intersection          :               28  :  : :
       ===============       : 431              23  : :
       Total Vol: 3390       :                    180 :
       PH Factor: 0.96       :                        :
                             :              231/0.84  :

============================================================================

1 - MONROE/STEVENS CREEK                                        EVENING PEAK
============================================================================

                             : 646/0.98         :
                             :                  :  N/S Street:
      Hour Ending: 05:45p    : 108              :  MONROE
                             : :  38      368   :
                             : :  :  500        :
                             : :  :  :          :
                             : :  :  :          :
           ------------------+ :  :  :        A +---------------
              1777       <---+    :  +--->    +--------  289
                                  V          <---------  1629   2275/0.86
                               A              +--------  357
                         53 --------+                 V
        1879/0.92      1776 ---------->          A
                         50 --------+     <---+  :  +--->    2572
           ------------------+ V              :  :  : +---------------
                             :                :  :  : :  E/W Street:
                             :                :  :  : :  STEVENS CREEK
       Intersection          :               40  :  : :
       ===============       : 445              26  : :
       Total Vol: 5162       :                    296 :
       PH Factor: 0.97       :                        :
                             :              362/0.86  :

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97 - 036

```
TOWN AND COUNTRY                                                    [illegible]
 CLEAR                                                               COUNT DATE
 SUNDBERG/N.SUNDBERG                                                      6/97

    MONROE/STEVENS CREEK                                           EVENING PEAK
================================================================================

                                677/0.94          :
                                                     N-S Street:
     Hour Ending: 06:00p        114               ,  MONROE
                                   45          504 :
                              : : :  515           :
                              : : :                .
                              : :   :
                ----------------               ^ +---------------
                    1732      ----    ----     --------  195
                                    v         ---------  1881     3028/0.92
                                 ^             --------  152
                       74 --------                 .
        1841/0.86    1749 ----------           ^
                       18 --------    ----  :  <---     1323
                ----------------+ v       . :  : +--------------
                                            .  . .  E-W Street:
                               :            :  : :  STEVENS CREEK
       Intersection            :          37 :  : :
      ===============          : 415        55  : :
      Total Vol: 5174          :             256  :
      PH Factor: 0.89          :                  :
                               :          328/0.80 :

================================================================================
```

97-036

```
[illegible]WN & [illegible]                                                [illegible]
[illegible]/CLEAR                                                       [illegible]
[illegible]                                                             [illegible]

[illegible] MONROE/STEVENS CREEK                                  [illegible]ENING PEAK
========================================================================

                            [illegible]04470.89

                                                N S Street:
     Hour Ending: [illegible]       [illegible]9                   MONROE
                             : [illegible]      1085 :
                             :    [illegible]40      :
                             :
                             :
               ----------------               [illegible] +---------------
                   1571     ----     -----    --------  [illegible]8
                                              --------- [illegible]   [illegible]
                                              --------  [illegible]4
                   [illegible] --------
 [illegible]       [illegible]89 ---------
                   [illegible] --------     ----     +---     [illegible]86
               ----------------+ V          :  :  :  +---------------
                                                   E W Street:
                                            :  :  :  STEVENS CREEK
 Intersection                :          24  :  :  :
 ===============             : 205          40 :  :
 Total Vol: 5747                               157 :
 PH Factor: 0.90             :                     :
                             :          221/0.81   :

========================================================================
```

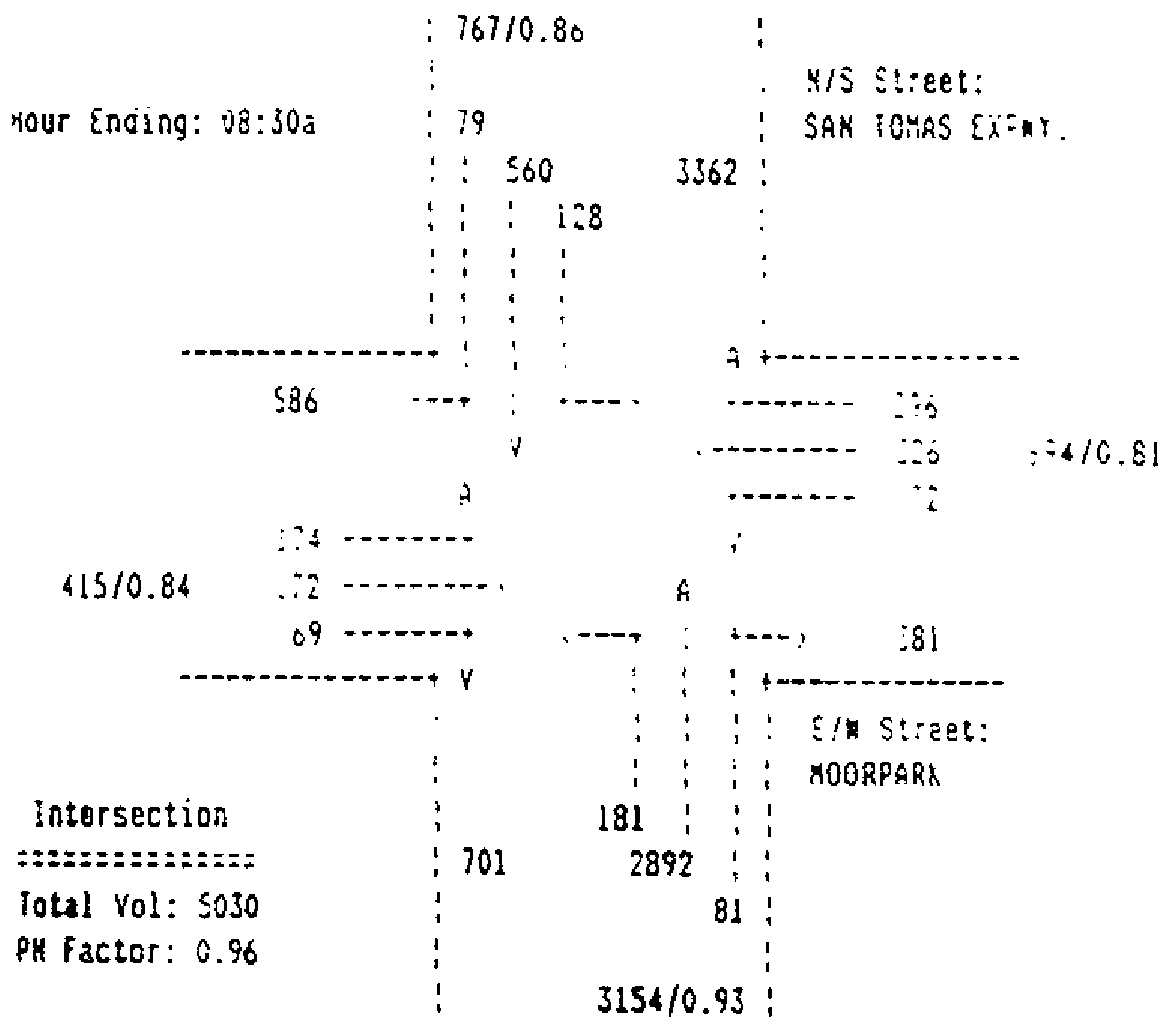
97-036

TOWN & COUNTRY
THURS/CLEAR
D.COOMBS/D.HOLMES

SUM-IT
COUNT DATE
4/17/97

. - SAN TOMAS EXPWY./MOORPARK

MORNING PEAK



Intersection
===============
Total Vol: 5030
PH Factor: 0.96

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT:		BARTON-ASCHMAN ASSOCIATES
PROJECT.		TOWN AND COUNTRY TIA
DATE:		THURSDAY APRIL 17 1997
PERIOD:		7:00 A.M. TO 9:00 A.M.
INTERSECTION:	N/S	SAN TOMAS PARKWAY
	E/W	STEVENS CREEK BOULEVARD

15 MIN COUNTS

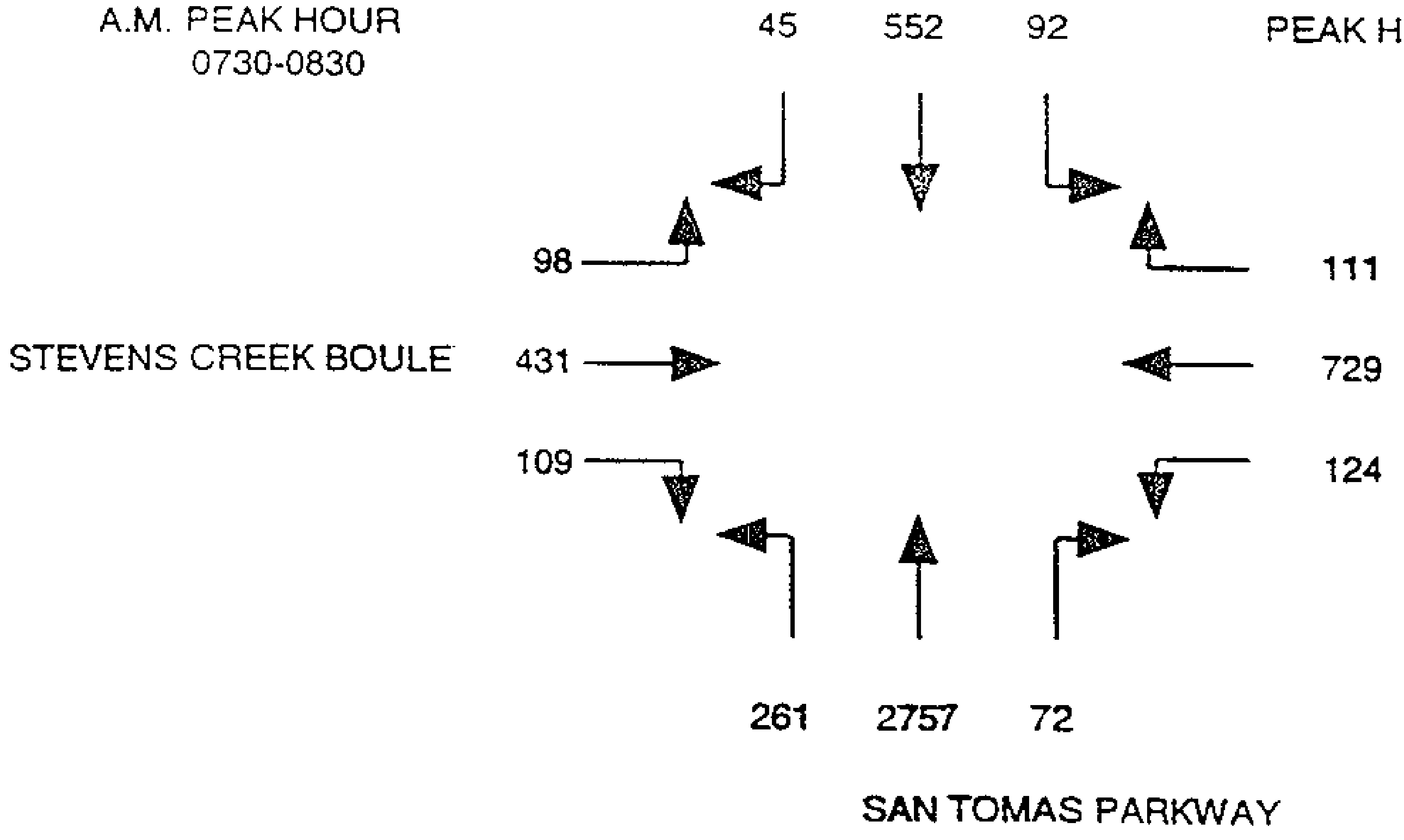
	1	2	3	4	5	6	7	8	9	10	11	12
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT
700-715	7	99	10	19	132	25	21	689	49	9	61	14
715-730	8	102	11	28	173	22	28	671	51	20	83	20
730-745	13	128	17	31	201	29	22	741	58	32	97	31
745-800	13	151	29	25	188	36	17	709	74	41	103	20
800-815	4	133	23	25	173	30	18	670	63	23	126	20
815-830	15	140	23	30	167	29	15	637	66	13	105	27
830-845	15	156	30	33	164	25	20	675	69	18	131	26
845-900	11	152	26	26	127	30	10	449	59	21	136	17

HOUR TOTALS

	1	2	3	4	5	6	7	8	9	10	11	12	
TIME	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
0700-0800	41	480	67	103	694	112	88	2810	232	102	344	85	5158
0715-0815	38	514	80	109	735	117	85	2791	246	116	409	91	5331
0730-0830	45	552	92	111	729	124	72	2757	261	109	431	98	5381
0745-0845	47	580	105	113	692	120	70	2691	272	95	465	93	5343
0800-0900	45	581	102	114	631	114	63	2431	257	75	498	90	5001

A.M. PEAK HOUR
0730-0830

PEAK HOUR FACTOR
0.96



97-036

```
TOWN AND COUNTRY                                                      [illegible]
WED/CLEAR                                                             [illegible]
J.HOLMES/D.COOMBS/N.SUNDBERG R.SUNDBERG                               [illegible]

[illegible] - SAN TOMAS EXPWY./STEVENS CREEK                         EVENING PEAK
===============================================================================

                              3191/0.92
                                 .                    N/S Street:
     Hour Ending: [illegible]:00p         126                   SAN TOMAS EXPWY.
                                 : :  2744        905 :
                                 : :   :  321
                                 : :   :   :
                                 :     :
          ---------------- .  .           A +---------------
              1231      ----  . ----     -------- [illegible]
                                /           --------- [illegible]   1369/0.92
                                A          -------- [illegible]
              60 --------                    .
     1385/0.94   955 ---------,          1
              370 -------+      ----     ----   1458
          ---------------- V       . :  : +---------------
                                 .                     E-W Street:
                                 :        . :  : .     STEVENS CREEK
     Intersection                :       190 :  : :
     ===============            .3397      674 : .
     Total Vol: 6991             :              182 :
     PH Factor: 0.92             :                  :
                                 :         1046/0.91 :

===============================================================================
TOWN AND COUNTRY                                                        [illegible]
[illegible]                                                         COUNT DATE
[illegible]                                                         [illegible]

1 - WINCHESTER MOORPARK                                            MORNING PEAK
==============================================================================

                              : [illegible]
                                                      N-S Street
     Hour Ending: [illegible]:30a       [illegible]                        WINCHESTER
                                    [illegible]      2299
                                  97
                                  :

                              :
           ----------------                  A ----------------
                [illegible]    <----        ---->     --------  [illegible]
                                :            <---------  [illegible]         [illegible]
                             :                        --------  [illegible]
                [illegible] --------
     [illegible]         [illegible] ---------/            A
                [illegible] --------       <----        ---->       [illegible]
           ---------------- ,                 :     ---------------
                                                         E-W Street
                              :            .      .       MOORPARK
        Intersection          :          70  |     :
        ===============         [illegible]     1608
        Total Vol: 4667       :              255 :
        PH Factor: 0.97       .
                              :        1964/0.91 :

==============================================================================
```

97-036

```
TOWN AND COUNTRY                                                        [illegible]
THURS/CLEAR                                                          COUNT DATE
[illegible]                                                         [illegible]/97

[illegible] WINCHESTER MOORPARK                                    EVENING PEAK
===========================================================================

                              . 1659/0.88          :
                              :                       N/S Street:
      Hour Ending: [illegible]   . 197                WINCHESTER
                              : :  1252   .  1525 :
                              : :  :  210         :
                              : :  :   .          .
                              : :  :
           ---------------+ :  :             . +---------------
                 609    ---+  :   ----.      --------  [illegible]
                               v             --------- [illegible]     [illegible]/0.94
                            A                --------  [illegible]
              [illegible] --------+                 .
 1671/[illegible]   [illegible] ---------.          A
                 475 -------+        ----        ----      [illegible]
           ---------------+ v          .  :  : +---------------
                            .          .  .  .    E/W Street:
                            :          :  .  . .  MOORPARK
  Intersection              :         76  :  : :
  ===============           :2037      713   : :
  Total Vol: 5425           :             355  :
  PH Factor: 0.90           :                  :
                            :         1144/0.93 :

===========================================================================
```

97-036

```
TOWN & COUNTRY                                                     SUM-IT
TUE/CLEAR                                                      COUNT DATE
.REILLEY/K.REILLEY                                                4/15/97

1 - TOWN & COUNTRY(EMPORIUM)/STEVENS CREEK                   MORNING PEAK
==========================================================================

                            | 28/0.70         |
                            |                 .  N/S Street:
      Hour Ending: 08:45a   | 5               |  TOWN
                            | |  3         38 |
                            | |  |   20       |
                            | |  |   |        |
                            | |  |   |        |
           -----------------+ |  |   |        A +---------------
            1542      <---+   |  |   +--->      +--------  12
                                 V            <---------- 1523   1553/0.91
                          A                     +--------  18
                  20 --------+                  V
      770/0.88   735 ---------->            A
                  15 --------+        <---+ |  +--->      788
           -----------------+ V          |  |  |  +---------------
                            |            |  |  |  |  E/W Street:
                            |            |  |  |  |  COUNTRY(EMPORIUM)/STEVENS C
       Intersection         |           14  |  |  |
       ===============      | 116           6  |  |
       Total Vol: 2484      |                  33 |
       PH Factor: 0.93      |                     |
                            |          53/0.74    |

==========================================================================

1 - TOWN & COUNTRY(EMPORIUM)/STEVENS CREEK                   EVENING PEAK
==========================================================================

                            | 253/0.82        |
                            |                 |  N/S Street:
      Hour Ending: 05:45p   | 99              |  TOWN
                            | |  20       204 |
                            | |  |   134      |
                            | |  |   |        |
                            | |  |   |        |
           -----------------+ |  |   |        A +----------------
            1407      <---+   |  |   +--->      +--------  29
                                 V            <---------- 1273   1474/0.97
                          A                     +--------  172
                 156 --------+                  V
      1641/0.94 1439 ---------->            A
                  46 --------+        <---+ |  +--->      1714
           -----------------+ V          |  |  |  +---------------
                            |            |  |  |  |  E/W Street:
                            |            |  |  |  |  COUNTRY(EMPORIUM)/STEVENS C
       Intersection         |           35  |  |  |
       ===============      | 238          19  |  |
       Total Vol: 3563      |                 141 |
       PH Factor: 0.97      |                     |
                            |         195/0.87    |

==========================================================================
```

97-036

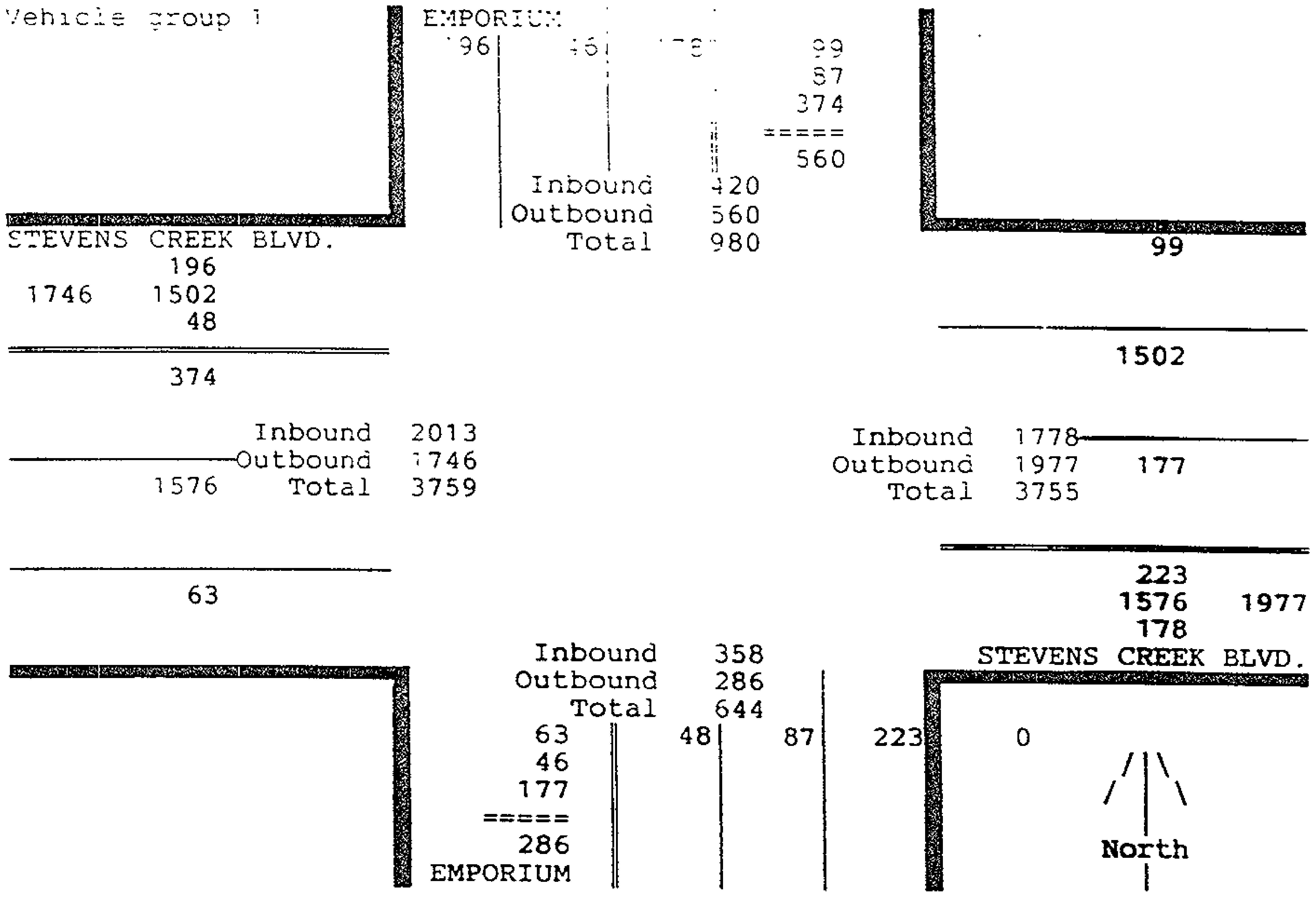
Weather
Counted by:
Board #
Other

255 E. Hamilton Ave., Suite K
Campbell, CA 95008
(408)374-2970

Study Name: VF2
Site Code : 00020000
Start Date: 09/27/97
Page : 2

[illegible]

Start Time	EMPORIUM From North Right	Thru	Left	Other	STEVENS CREEK BLVD. From East Right	Thru	Left	Other	EMPORIUM From South Right	Thru	Left	Other	STEVENS CREEK BLVD. From West Right	Thru	Left	Other	Intvl. Total
Peak Hour Analysis By Entire Intersection for the Period: 14:00 on 09/27/97 to 15:45 on 09/27/97																	
Time	14:45				14:45				14:45				14:45				
Vol.	196	46	178	0	99	1502	177	0	223	87	48	0	63	1576	374	0	
Pct.	46.6	10.9	42.3	0.0	5.6	84.4	9.9	0.0	62.2	24.3	13.4	0.0	3.1	78.2	18.5	0.0	
Total	420				1778				358				2013				
High	14:45				15:00				14:45				15:30				
Vol.	52	14	48	0	24	397	52	0	68	31	10	0	20	388	105	0	
Total	114				473				109				513				
PHF	0.921				0.939				0.821				0.980				



97-036

```
TOWN & COUNTRY                                                  SUM-II
THURS/CLEAR                                                 COUNT DATE
REILLEY/K.REILLEY                                              4/10/97

1 - VALLEY FAIR (REDWOOD)/STEVENS CREEK                   MORNING PEAK
::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::

                              ¦ 26/0.81       ¦
                              ¦               ¦ N-S Street:
      Hour Ending: 08:45a     ¦ 9             ¦ VALLEY FAIR (REDWOOD)
                              ¦ ¦  0      78  ¦
                              ¦ ¦  ¦  17      ¦
                              ¦ ¦  ¦  ¦       ¦
                              ¦ ¦  ¦  ¦       ¦
             ----------------+ ¦  ¦  ¦       A +---------------
                  1594   <---+    ¦  +--->    +-------   52
                                  V         <---------  1385   1478/0.87
                             A                +-------   41
                  26 -------+                 V
     853/0.86    827 ---------->          A
                   0 -------+       <---+ ¦ +--->   344
             ----------------+ V      ¦   ¦ ¦ +---------------
                              ¦       ¦   ¦ ¦ ¦ E-W Street:
                              ¦       ¦   ¦ ¦ ¦ STEVENS CREEK
      Intersection            ¦       0   ¦ ¦ ¦
      ===============         ¦  41       0 ¦ ¦
      Total Vol: 2557         ¦             0 ¦
      PH Factor: 0.91         ¦               ¦
                              ¦        0/0.94 ¦

::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::

1 - VALLEY FAIR (REDWOOD)/STEVENS CREEK                   EVENING PEAK
::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::

                              ¦ 340/0.90      ¦
                              ¦               ¦ N/S Street:
      Hour Ending: 06:00p     ¦ 126           ¦ VALLEY FAIR (REDWOOD)
                              ¦ ¦  0     357  ¦
                              ¦ ¦  ¦  214     ¦
                              ¦ ¦  ¦  ¦       ¦
                              ¦ ¦  ¦  ¦       ¦
             ----------------+ ¦  ¦  ¦       A +---------------
                  1499   <---+    ¦  +--->    +-------  214
                                  V         <---------  1373   1643/0.95
                             A                +-------   56
                 143 -------+                 V
    1756/0.96   1613 ---------->          A
                   0 -------+       <---+ ¦ +--->   1827
             ----------------+ V      ¦   ¦ ¦ +---------------
                              ¦       ¦   ¦ ¦ ¦ E/W Street:
                              ¦       ¦   ¦ ¦ ¦ STEVENS CREEK
      Intersection            ¦       0   ¦ ¦ ¦
      ===============         ¦  56       0 ¦ ¦
      Total Vol: 3739         ¦             0 ¦
      PH Factor: 0.98         ¦               ¦
                              ¦        0/0.00 ¦

::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
```

97-036

Weather :
Counted by:
Board #
Other

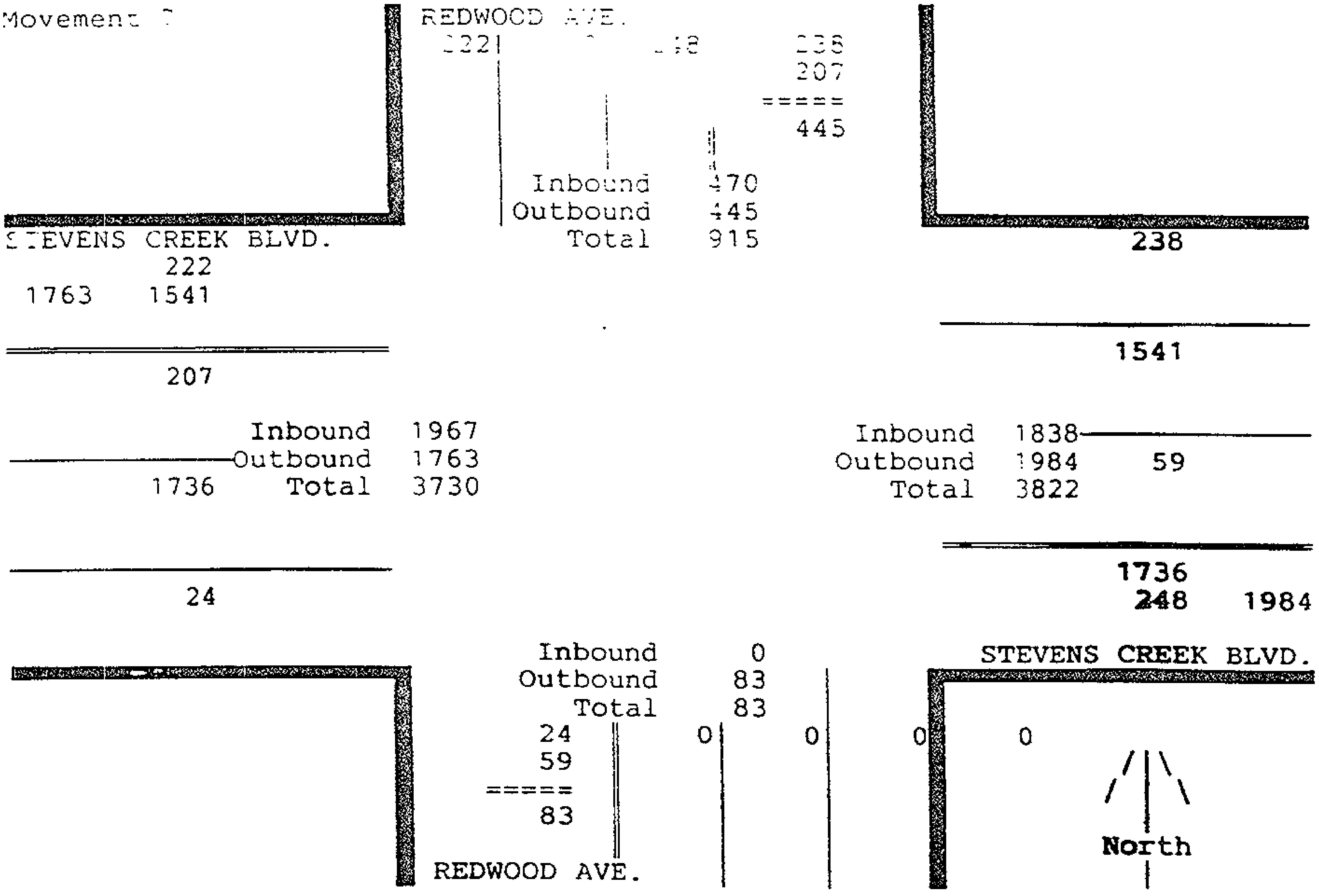
256 E. Hamilton Ave.
Suite K
Campbell, CA 95008

Study Name: vF1
Site Code : 00000001
Start Date: 09/27/97
Page : 2

Movement

	REDWOOD AVE.				STEVENS CREEK BLVD.				REDWOOD AVE.				STEVENS CREEK BLVD.				
	From North				From East				From South				From West				
Start Time	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Intvl. Total
Peak Hour Analysis By Entire Intersection for the Period: 14:00 on 09/27/97 to 15:45 on 09/27/97																	
Time	14:30				14:30				14:30				14:30				
Vol.	222	0	248	0	238	1541	59	0	0	0	0	0	24	1736	207	0	
Pct.	47.2	0.0	52.7	0.0	12.9	83.8	3.2	0.0	0.0	0.0	0.0	0.0	1.2	88.2	10.5	0.0	
Total	470				1838				0				1967				
High	14:30				15:00				15:00				14:30				
Vol.	54	0	59	0	66	389	19	0	0	0	0	0	6	452	47	0	
Total	123				474				0				505				
PHF	0.955				0.969				0.000				0.973				

Movement 7



97-036

```
TOWN & COUNTRY                                                      SUM-IT
WED/CLEAR                                                       COUNT DATE
F SUNDBERG/K.HALEY                                                 4/16/97

. - WINCHESTER/STEVENS CREEK                                  MORNING PEAK
==========================================================================

                               . 445/0.83      :
                               .               :  N/S Street:
      Hour Ending: 08:45a      . 87            :  WINCHESTER
                               : :  241   1463 :
                               : :  :  117     :
                               : :  :  :       :
                               : :  :  :       :
           ----------------+   '  :  :         A +--------------
              1025      ---+  :  ----'         --------  147
                              V               <---------  [illegible]     1038 0.86
                            A                 --------  104
               145 --------                    V
     755/0.87  474 ---------->               A
               136 -------+      <---+  :  +---->    851
           ----------------+ V       :  :  : +--------------
                             :       :  :  : :  E/W Street:
                             :       :  :  : :  STEVENS CREEK
         Intersection        :      151 :  : :
         ===============     : 701    1071 : :
         Total Vol: 4040     :            260 :
         PH Factor: 0.92     :                :
                             :    1482/0.87   :

==========================================================================
```

97-036

```
TOWN AND COUNTRY                                                          [illegible]
THURS/CLEAR                                                               [illegible]
SUNDBERG/N.SUNDBERG                                                       [illegible]

[illegible] WINCHESTER/STEVENS CREEK                                      [illegible]
==========================================================================


                                   1457/0.[illegible]
                                                          N-S Street:
     Hour Ending: [illegible]      [illegible]           WINCHESTER
                                      [illegible]40     973 |
                                   |     [illegible]      |



        ----------------                        ^ ---------------
                   1340    ----     ----        --------  [illegible]
                                                ---------  [illegible]       [illegible]
                                                --------  [illegible]
                [illegible] --------
      1534/0.94  [illegible] ---------
                281 --------      ----      ----       [illegible]
        ---------------- v                      +--------------
                                                E-W Street:
                        |                    |  STEVENS CREEK
   Intersection         |             267 |  |
   ===============      |1793          517   |
   Total Vol: 5852      |                 439 |
   PH Factor: 0.94      |                    |
                        |         1223/0.87 |

==========================================================================
TOWN & COUNTRY                                                          [illegible]
SAT/CLEAR                                                               COUNT DATE
W.JACKSON/J.JACKSON                                                        7/19/97

1 - WINCHESTER/STEVENS CREEK                                          EVENING PEAK
==========================================================================

                                1269/0.94
                                                 :  N S Street:
     Hour Ending: [illegible]    277                 WINCHESTER
                               : :  716     297 :
                               : :  :  276
                               : :  :  :          .
                               : :  :  :          .
              ---------------  : :  :  :        [illegible] <---------------
                1703       ----  :  ----       -------- [illegible]
                                 v            ----- --- [illegible]    1821/0.95
                               ^               -------- [illegible]
                   242 --------                    v
         1472/0.92 852 ---------          ^
                   378 --------      ----  .  ----      [illegible]
              ---------------- v               : ---------------
                               :        :  :  : :  E W Street:
                                           .  .  .  STEVENS CREEK
     Intersection              :      332  :  : :
     ===============           :1648     582  : :
     Total Vol: 6126           :            650 :
     PH Factor: 0.95           :                :
                               :      1564/0.88 :

==========================================================================
```

97-036

```
TOWN & COUNTRY                                                     SUM-IT
WED/CLEAR                                                      COUNT DATE
D.HOLMES/D.COOMB                                                  4/16/97

1 - WINCHESTER/TISCH                                         MORNING PEAK
=========================================================================

                          | 573/0.84        |
                          |                 |  N/S Street:
   Hour Ending: 08:30a    | 166             |  WINCHESTER
                          | | 352      1556 |
                          | | |  55         |
                          | | |  |          |
       -------------------+ | |  |          A +---------------
             713      <---+ | |  +---->      +-------  [illegible]
                              V             <---------  [illegible]     [illegible]/0.91
                            A                +-------  [illegible]
                   0 -------+                V
   0/0.00          0 --------->          A
                   0 -------+      <---+ |  +---->   469
       -------------------+ V          | |  | +---------------
                          |            | |  | |  E/W Street:
                          |            | |  | |  TISCH
     Intersection         |        531 |  | |
    ===============       | 392     1539  | |
    Total Vol: 3130       |              414 |
    PH Factor: 0.93       |                  |
                          |      2484/0.96   |

=========================================================================

1 - WINCHESTER/TISCH                                         EVENING PEAK
=========================================================================

                          | 1606/0.95       |
                          |                 |  N/S Street:
   Hour Ending: 06:00p    | 305             |  WINCHESTER
                          | | 1259     1098 |
                          | | |  42         |
                          | | |  |          |
       -------------------+ | |  |          A +---------------
             729      <---+ | |  +--->       +-------  49
                              V             <---------  91      446/0.84
                            A                +-------  306
                   0 -------+                V
   0/0.00          0 --------->          A
                   0 -------+      <---+ |  +--->    174
       -------------------+ V          | |  | +---------------
                          |            | |  | |  E/W Street:
                          |            | |  | |  TISCH
     Intersection         |        333 |  | |
    ===============       |1565     1049  | |
    Total Vol: 3566       |              132 |
    PH Factor: 0.94       |                  |
                          |      1514/0.94   |

=========================================================================
```

97-036

Weather :
Counted by:
Board # :
Other :

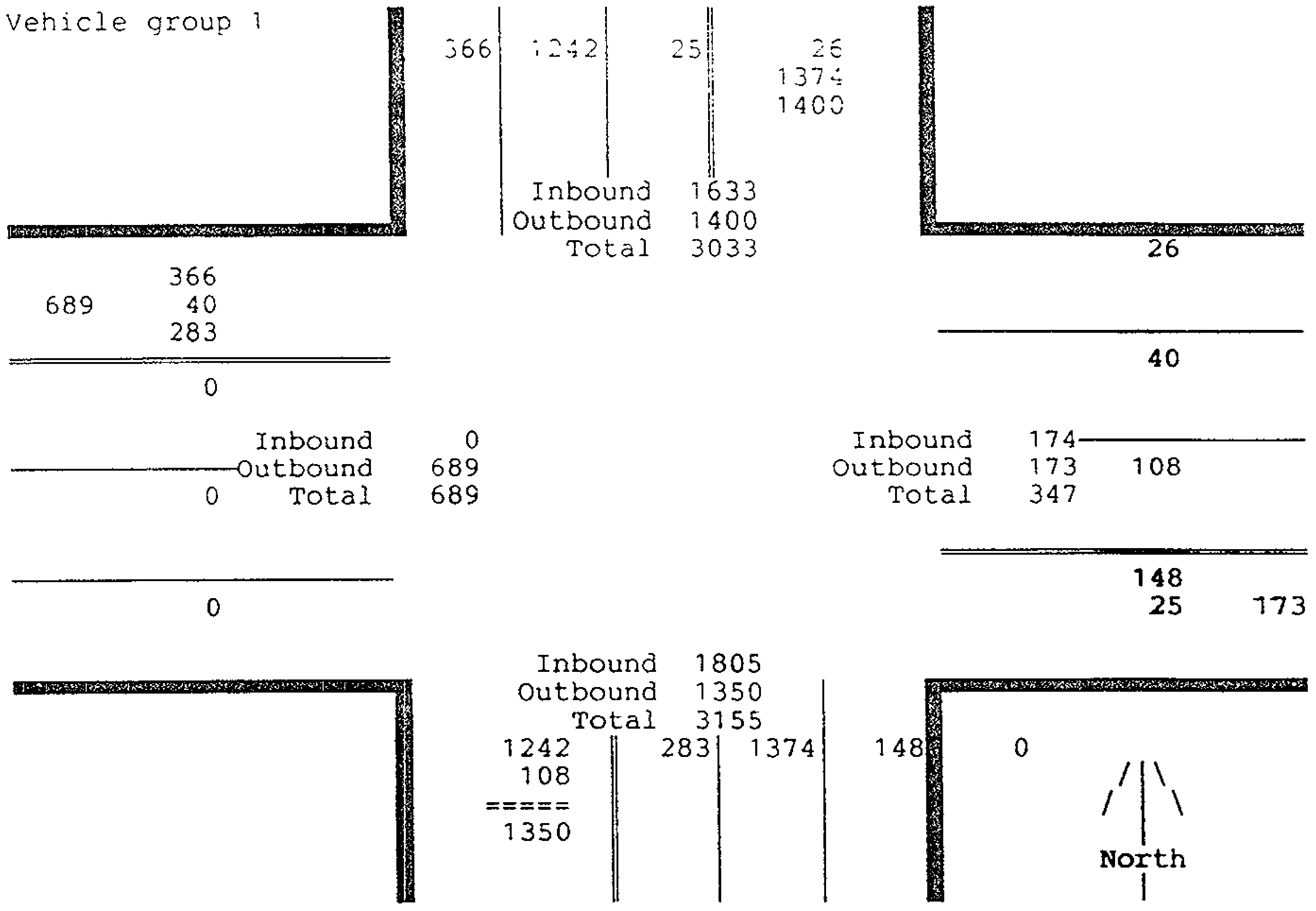
255 E. Hamilton Ave.
Suite K
Campbell, CA 95008

Study Name: VF3
Site Code : 00030000
Start Date: 09/27/97
Page : 2

Vehicle group 1

	WINCHESTER				*TISCH*				*WINCHESTER*				*NB 280 ON-RAMP*				
	From North				From East				From South				From West				
Start Time	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Right	Thru	Left	Other	Intvl. Total
Peak Hour Analysis By Entire Intersection for the Period: 14:00 on 09/27/97 to 15:45 on 09/27/97																	
Time	14:45				14:45				14:45				14:45				
Vol.	366	1242	25	0	26	40	108	0	148	1374	283	0	0	0	0	0	
Pct.	22.4	76.0	1.5	0.0	14.9	22.9	62.0	0.0	8.1	76.1	15.6	0.0	0.0	0.0	0.0	0.0	
Total	1633				174				1805				0				
High	15:15				15:30				14:45				14:45				
Vol.	106	318	5	0	5	12	28	0	44	340	82	0	0	0	0	0	
Total	429				45				466				0				
PHF	0.951				0.966				0.968				0.000				

Vehicle group 1



97-036

FROM : TRAFFIC DATA SERVICE

Post-it Fax Note 7672

To ROBERT DEL [illegible]
Co. BARTON ASCHMAN
Dept. SAN JOSE
Fax # (408) 280-7533
Phone # (408) [illegible]

From RICK [illegible]
Co. [illegible]
CAMPBELL
Fax # (408) 374-[illegible]
Phone # (408) 374-2970

Comments

RE: WINCHESTER @ WILLIAMS TURNING MOVEMENT COUNT

TRAFFIC DATA SERVICE

Site Code : WINBWILA
N-S Street: WINCHESTER
E-W Street: WILLIAMS
Weather :

Movements by: Primary

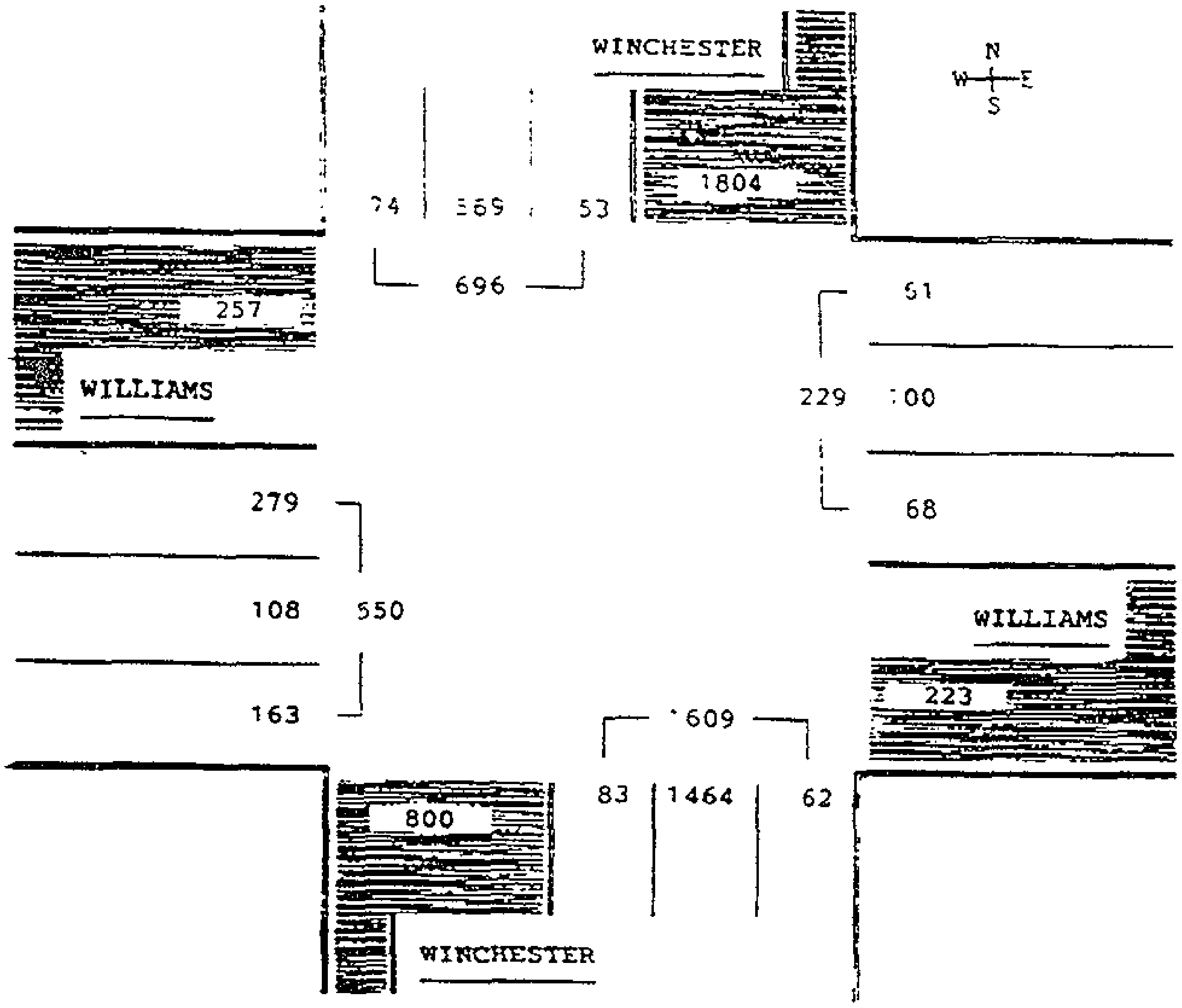
PAGE: 1
FILE: WINBWILA
DATE: 4/16/97

PEAK PERIOD ANALYSIS FOR THE PERIOD [illegible] AM - [illegible] AM

DIRECTION FROM	START PEAK HOUR	PEAK HR FACTOR	VOLUMES Right	Thru	Left	Total	PERCENTS Right	Thru	Left
North	[illegible]:00 AM	[illegible].92	6	635	[illegible]	[illegible]		94	[illegible]
East	7:15 AM	0.90	57	[illegible]	[illegible]	[illegible]	25	45	[illegible]
South	7:15 AM	0.94	62	1484	[illegible]	1613	4	92	4
West	7:30 AM	0.94	163	108	279	550	30	20	51

Entire Intersection

DIRECTION FROM	START PEAK HOUR	PEAK HR FACTOR	VOLUMES Right	Thru	Left	Total	PERCENTS Right	Thru	Left
North	7:30 AM	0.88	74	569	53	696	[illegible]	82	8
East		0.80	51	100	68	229	22	44	30
South		0.94	62	1454	83	1609	4	91	5
West		0.94	163	108	279	550	30	20	51



97-036

TRAFFIC DATA SERVICE

File Name : WIN&WILP
N-S Street: WINCHESTER
E-W Street: WILLIAMS
Weather

Movement: All Primary

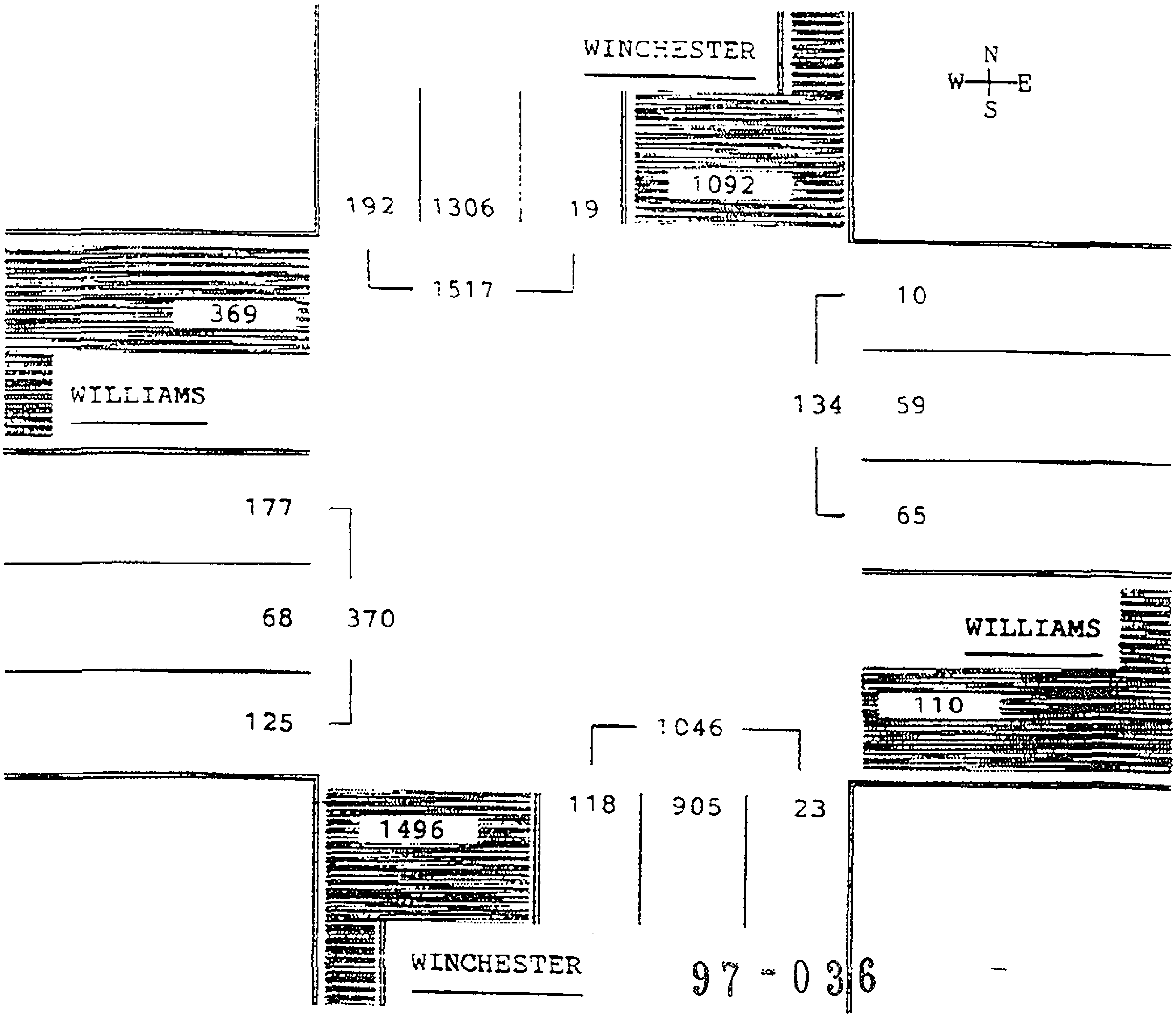
PAGE:
FILE: WIN&WILP
DATE: 4/16/97

PEAK PERIOD ANALYSIS FOR THE PERIOD: 4:00 PM - 6:00 PM

DIRECTION FROM	START PEAK HOUR	PEAK HR FACTOR	VOLUMES Right	VOLUMES Thru	VOLUMES Left	VOLUMES Total	PERCENTS Right	PERCENTS Thru	PERCENTS Left
North	4:45 PM	0.94	192	1306	19	1517	13	86	1
East	4:30 PM	0.85	16	67	73	156	10	43	47
South	4:30 PM	0.94	27	903	123	1053	3	86	12
West	4:45 PM	0.95	125	68	177	370	34	18	48

Entire Intersection

DIRECTION FROM	START PEAK HOUR	PEAK HR FACTOR	VOLUMES Right	VOLUMES Thru	VOLUMES Left	VOLUMES Total	PERCENTS Right	PERCENTS Thru	PERCENTS Left
North	4:45 PM	0.94	192	1306	19	1517	13	86	1
East		0.73	10	59	65	134	7	44	49
South		0.93	23	905	118	1046	2	87	11
West		0.95	125	68	177	370	34	18	48



97-036

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TOWN & COUNTRY                                                        SUM-IT
WED/CLEAR                                                         COUNT DATE
J.REILLEY/K.REILLEY                                                  4/16/97

1 - WINCHESTER/OLIN                                             MORNING PEAK
===============================================================================

                               ¦ 564/0.92          ¦
                               ¦                   ¦  N/S Street:
     Hour Ending: 08:30a       ¦ 8                 ¦  WINCHESTER
                               ¦ ¦  513      1460  ¦
                               ¦ ¦  ¦  43          ¦
                               ¦ ¦  ¦  ¦           ¦
                               ¦ ¦  ¦  ¦           ¦
                               ¦ ¦  ¦  ¦           ¦
                ---------------+ ¦  ¦  ¦         A +---------------
                      20   <---+    ¦  +--->     +-------   12
                                    V          <---------    1      17/0.47
                                 A               +-------    4
                      12 -------+                V
           29/0.60     0 --------->           A
                      17 -------+      <---+  ¦  +--->      79
                ---------------+ V         ¦  ¦  ¦ +---------------
                               ¦           ¦  ¦  ¦ ¦  E/W Street:
                               ¦           ¦  ¦  ¦ ¦  OLIN
      Intersection             ¦          11  ¦  ¦ ¦
      ===============          ¦ 534     1436    ¦ ¦
      Total Vol: 2093          ¦                36 ¦
      PH Factor: 0.92          ¦                   ¦
                               ¦         1483/0.87 ¦

===============================================================================

1 - WINCHESTER/OLIN                                             EVENING PEAK
===============================================================================

                               ¦ 1564/0.96         ¦
                               ¦                   ¦  N/S Street:
     Hour Ending: 06:00p       ¦ 40                ¦  WINCHESTER
                               ¦ ¦  1410      972  ¦
                               ¦ ¦  ¦  114         ¦
                               ¦ ¦  ¦  ¦           ¦
                               ¦ ¦  ¦  ¦           ¦
                               ¦ ¦  ¦  ¦           ¦
                ---------------+ ¦  ¦  ¦         A +---------------
                      63   <---+    ¦  +--->     +-------   25
                                    V          <---------    1      82/0.85
                                 A               +-------   56
                      22 -------+                V
           54/0.71     3 --------->           A
                      29 -------+      <---+  ¦  +--->      168
                ---------------+ V         ¦  ¦  ¦ +---------------
                               ¦           ¦  ¦  ¦ ¦  E/W Street:
                               ¦           ¦  ¦  ¦ ¦  OLIN
      Intersection             ¦          22  ¦  ¦ ¦
      ===============          ¦1495       925   ¦ ¦
      Total Vol: 2698          ¦                51 ¦
      PH Factor: 0.98          ¦                   ¦
                               ¦          998/0.93 ¦

===============================================================================
```

97-036

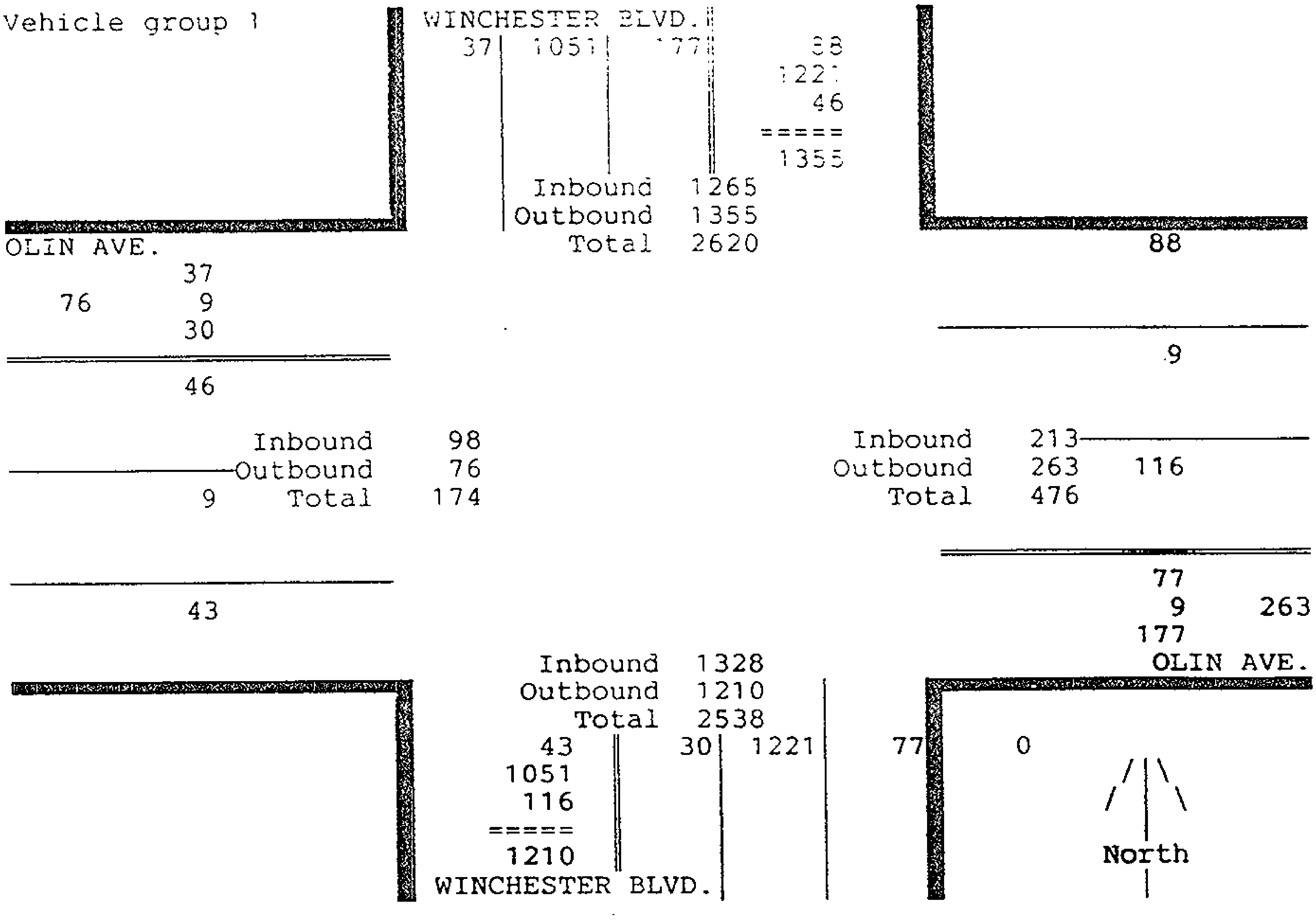
Weather :
Counted by:
Board # :
Other :

255 E. Hamilton Ave., Suite K
Campbell, CA 95008
408)374-2970

Study Name: VF5
Site Code : 00000005
Start Date: 09/27/97
Page : 2

Vehicle group 1

Start Time	WINCHESTER BLVD. From North Right	Thru	Left	Other	OLIN AVE. From East Right	Thru	Left	Other	WINCHESTER BLVD. From South Right	Thru	Left	Other	OLIN AVE. From West Right	Thru	Left	Other	Intvl. Total
Peak Hour Analysis By Entire Intersection for the Period: 14:00 on 09/27/97 to 15:45 on 09/27/97																	
Time	14:00				14:00				14:00				14:00				
Vol.	37	1051	177	0	88	9	116	0	77	1221	30	0	43	9	46	0	
Pct.	2.9	83.0	13.9	0.0	41.3	4.2	54.4	0.0	5.7	91.9	2.2	0.0	43.8	9.1	46.9	0.0	
Total	1265				213				1328				98				
High	14:00				14:15				14:00				14:45				
Vol.	13	289	49	0	28	6	32	0	22	313	12	0	17	1	20	0	
Total	351				66				347				38				
PHF	0.900				0.806				0.956				0.644				



97-036

```
TOWN & COUNTRY                                                          SUM-IT
THUR/CLEAR                                                          COUNT DATE
K.REILLEY/J.REILLEY                                                    4/17/97

 1 - WINCHESTER/OLSEN                                             MORNING PEAK
=================================================================================

                                ¦ 508/0.86          ¦
                                                    ¦  N/S Street:
      Hour Ending: 08:30a       ¦ 9                 ¦  WINCHESTER
                                ¦ ¦  494       1512 ¦
                                ¦ ¦  ¦  5           ¦
                                ¦ ¦  ¦  ¦           ¦
                                ¦ ¦  ¦  ¦           ¦
                ----------------+ ¦  ¦  ¦         A +---------------
                       73      ---+  :  ---->     +-------     3
                                     V          <---------     :      16/0.54
                                  A               +-------    13
                        6 --------+               V
          19/0.79       0 ---------->          A
                       13 --------+      ---+  ¦  +---->      49
                ----------------+ V         ¦  ¦  ¦ +--------------
                                :           ¦  ¦  ¦ ¦  E/W Street:
                                :           ¦  ¦  ¦ ¦  OLSEN
       Intersection             :          64  ¦  ¦ ¦
      ===============           : 525       1498  ¦ ¦
      Total Vol: 2159           :                44 ¦
      PH Factor: 0.83           :                   ¦
                                :         1606/0.81 ¦

=================================================================================

 1 - WINCHESTER/OLSEN                                             EVENING PEAK
=================================================================================

                                ¦ 1505/0.98         ¦
                                ¦                   ¦  N/S Street:
      Hour Ending: 06:00p       ¦ 39                ¦  WINCHESTER
                                ¦ ¦  1441      1030 ¦
                                ¦ ¦  ¦  25          ¦
                                ¦ ¦  ¦  ¦           ¦
                                ¦ ¦  ¦  ¦           ¦
                ----------------+ ¦  ¦  ¦         A +---------------
                      133     <---+  ¦  +--->     +-------    48
                                     V          <---------     7     141/0.77
                                  A               +-------    86
                       33 --------+               V
          59/0.64       3 ---------->          A
                       23 --------+      <---+ ¦  +--->     129
                ----------------+ V         ¦  ¦  ¦ +--------------
                                :           ¦  ¦  ¦ ¦  E/W Street:
                                :           ¦  ¦  ¦ ¦  OLSEN
       Intersection             :          87  ¦  ¦ ¦
      ===============           ¦1550        949  ¦ ¦
      Total Vol: 2842           :               101 ¦
      PH Factor: 0.97           :                   ¦
                                :        1137/0.89  ¦

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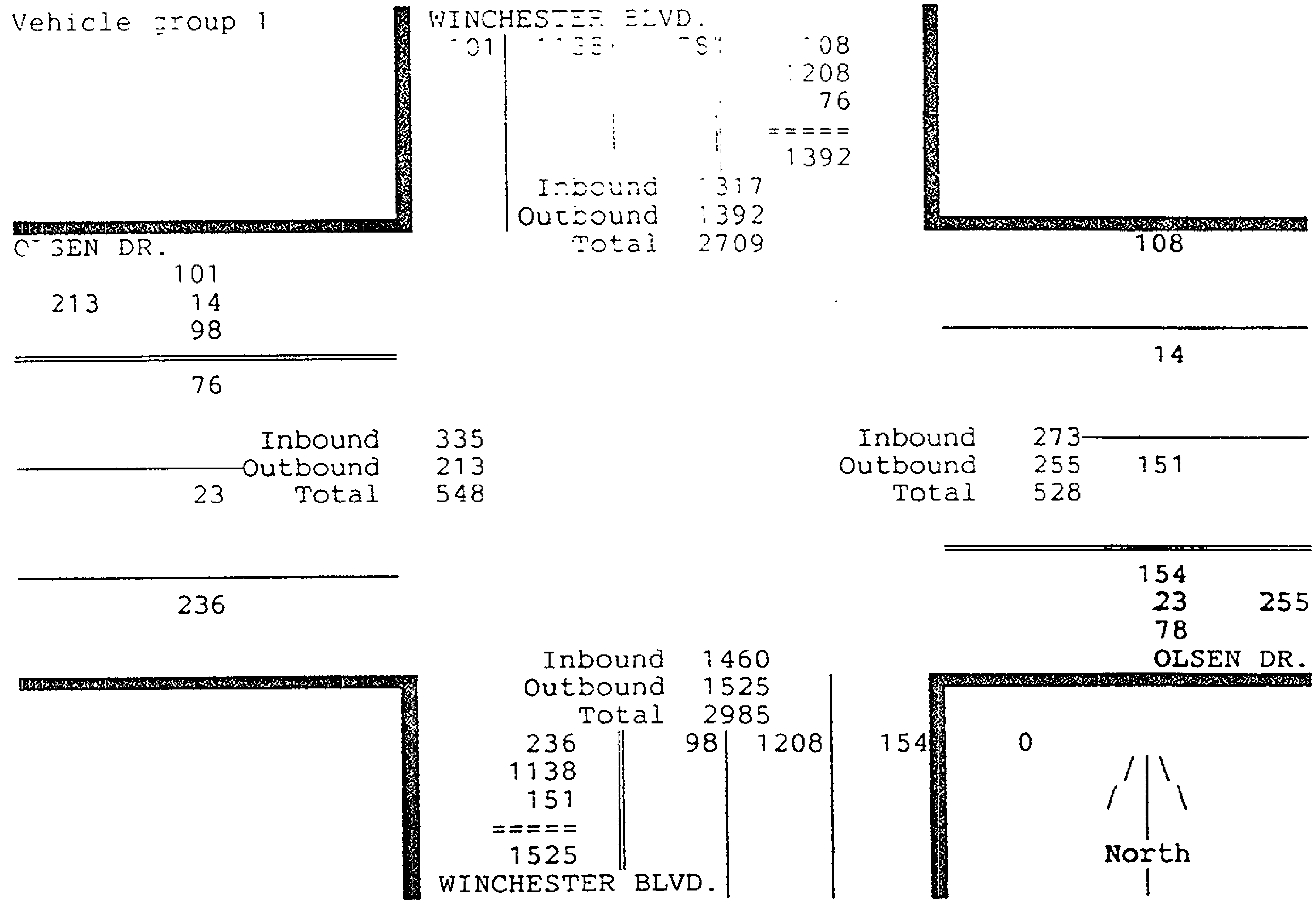
```

97-036

```
Weather    :Fair                   255 E. Hamilton Ave.                     Study Name: VF4
Counted by:                               Suite K                           Site Code : 00004444
Board #    :                        Campbell , CA  95008                    Start Date: 10/04/97
Other      :                                                                Page      : 2
                                          [illegible] group
          WINCHESTER BLVD.           OLSEN DR.                   WINCHESTER BLVD.             OLSEN DR.
         |From North                |From East                   From South                   From West
 Start   |                          |                                                                              |Intvl.
 Time    | Right   Thru   Left      | Right   Thru   Left          Right   Thru   Left          Right   Thru   Left  | Total
-------------------------------------------------------------------------------------------------------------------------
 Peak Hour Analysis By Entire Intersection for the Period: 14:00 on 10/04/97 to 15:45 on 10/04/97                  |
 Time    | 14:15                    | 14:15                        14:15                        14:15                |
 Vol.    |   101   1138    78      0|   108    14    151      0|     154   1208    98      0      236    23    76     0|
 Pct.    |   7.7   86.4   5.9    0.0|  39.5   5.1   55.3    0.0|    10.5   82.7   6.7    0.0     70.4   6.8  22.6   0.0|
 Total   |  1317                    |   273                    |    1460                          335                  |
 High    | 14:45                    | 14:30                    |   15:00                          14:45                |
 Vol.    |    29    299    19      0|    32     8     37      0|      46    303    27      0       53     8    18     0|
 Total   |   347                    |    77                    |     376                           89                  |
 PHF     | 0.948                    | 0.886                    |   0.970                          0.941                |
```

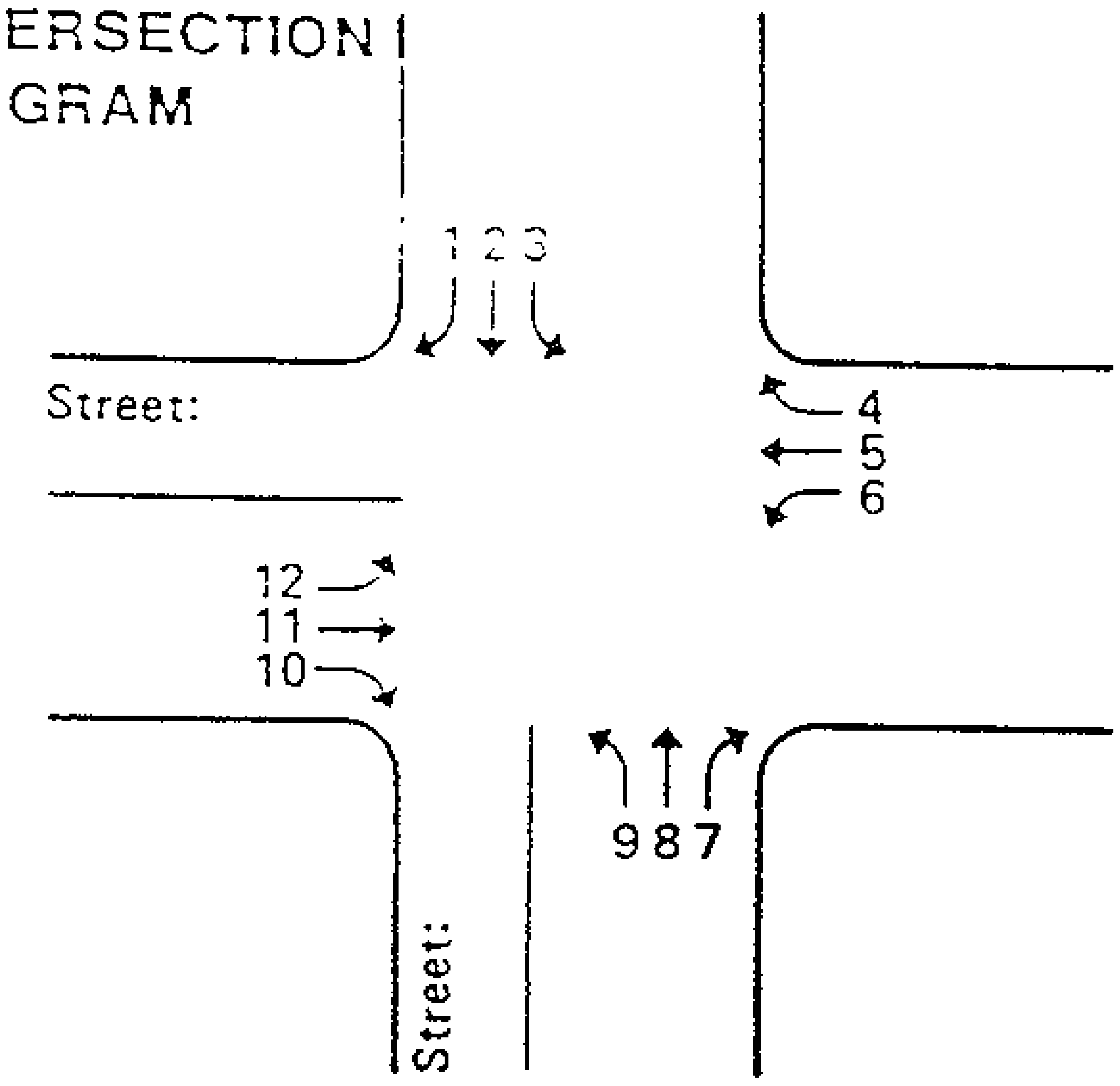


97-036

FACT FINDERS DATA SERVICE
-08-227-1604 (Office)
-06-260-8838 (Beeper)

PROJECT: [illegible]
INTERSECTION: [illegible] Driveways
NAME: [illegible]
DATE: 9-30-97
DAY OF WEEK: Tue. 7-9 a.m.
WEATHER: Clear

INTERSECTION DIAGRAM



COUNT TABLE

STREET NAME OF APPROACH	Winchester Driveways				Alvarado Circle Dr.	
MOVEMENT TYPE (Right, Thru, Left)	#3-Customer Parking		#4-Fleet Entrance			
MOVEMENT NUMBER (1-2-3-4-etc.)	In	Out	In	Out	In	Out
TIME OF RECORDED COUNT:	COUNTS:	COUNTS:	COUNTS:	COUNTS:	COUNTS:	COUNTS:
7:00	0	0	0	0	0	0
7:15	4 / 4	2 / 2	closed		6	0 / 0
7:30	7 / 11	1 / 3			14	1 / 1
7:45	5 / 16	2 / 5			23	5 / 6
8:00	2 / 18	2 / 7			6 / 29	5 / 11
8:15	3 / 21	3 / 10			5 / 34	0 / 11
8:30	2 / 23	1 / 11			10 / 44	1 / 12
8:45	5 / 28	5 / 16			8 / 52	1 / 13
9:00	7 / 35	6 / 22			5 / 57	2 / 15
9:15						
9:30	In	Out	Total			
9:45	47	18	65			
10:00						

SET-UP INSTRUCTIONS

1. Locate landmarks on each corner of the intersection diagram.
INDICATE NORTH!
2. Label street names in intersection diagram and count table.
3. Circle movement numbers being counted on the intersection diagram and assign one to each of the columns in the count table.
4. Label the approach street name and movement type for each movement in the count table.
5. Record the times at which counts will be recorded in the count table, including the times the survey is started and completed.

In	O
10	[illegible]
15	2
14	7
9	7
8	3
12	2
13	6
12	9

COUNTING INSTRUCTIONS

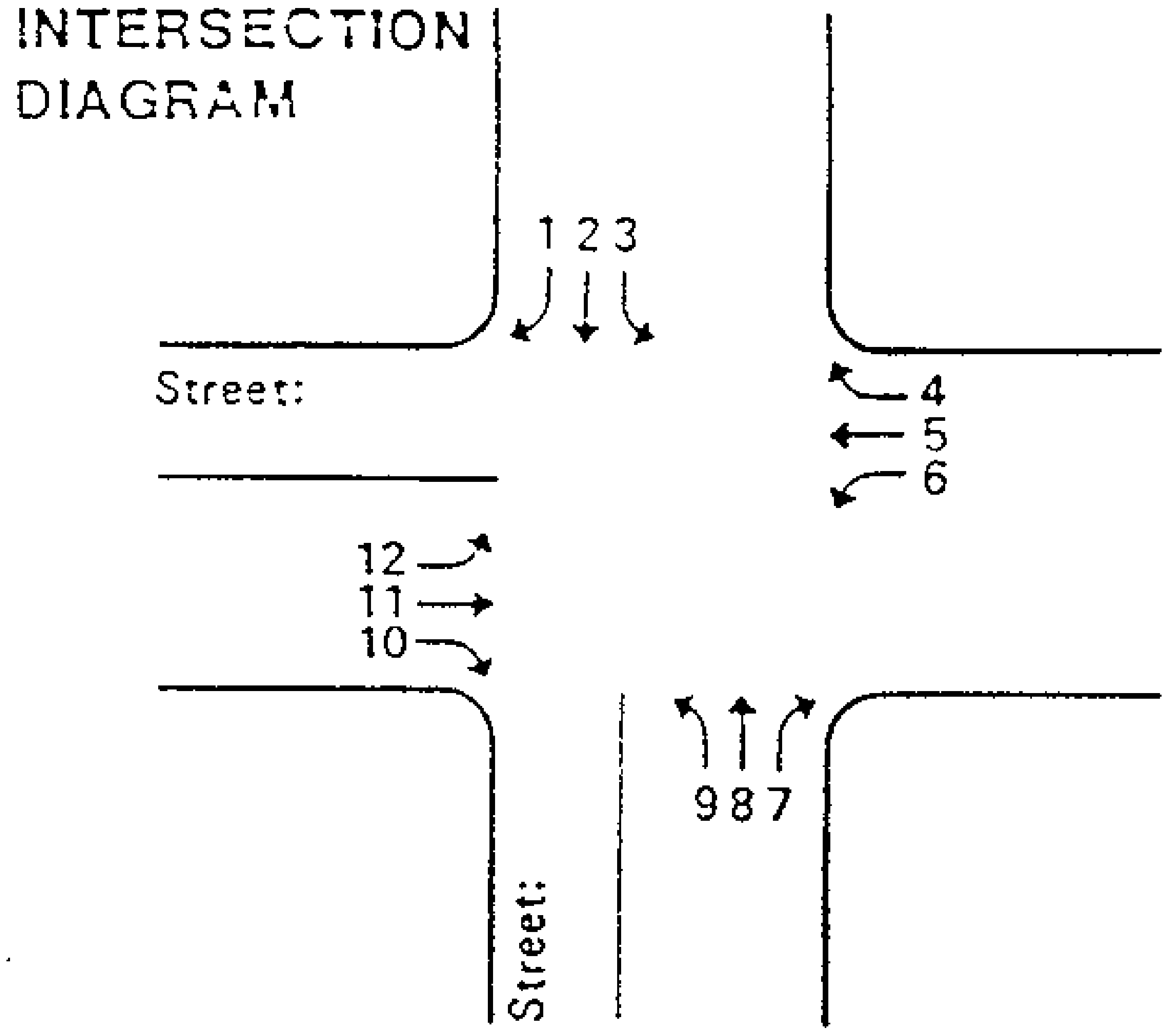
1. Record the initial counts displayed on the count board at the start of the survey in the first row of the count table (many times this is zero but not necessarily).
2. Record the counts every fifteen minutes in the row with the time at which the count is recorded. DO NOT RESET THE COUNT BOARD DURING A COUNT!
3. Do not forget to record the final count at the end of the survey.

97-036

FACT FINDERS DATA SERVICE
408-227-1604(Office)
408-280-8838(Beeper)

PROJECT: Town & Country
INTERSECTION: Country Chevrolet Driveway
NAME: [illegible]
DATE: 9-30-97
DAY OF WEEK: Tue. 4-6 p.m.
WEATHER: Clear

INTERSECTION DIAGRAM



COUNT TABLE

STREET NAME OF APPROACH	Winchester Driveway				Stevens Creek Drive	
MOVEMENT TYPE (Right, Thru, Left)	Customer Parking		Fleet Entrance			
MOVEMENT NUMBER (1-2-3-4-etc.)	In	Out	In	Out	In	Out
TIME OF RECORDED COUNT:	COUNTS:	COUNTS:	COUNTS:	COUNTS:	COUNTS:	COUNTS:
4:00	0	0	0	0	0	0
4:15	5 / 5	12 / 12	1 / 1	0 / 0	4 / 4	1 / 1
4:30	10 / 15	9 / 23	3 / 4	2 / 2	8 / 12	2 / 3
4:45	2 / 17	8 / 31	0 / 4	0 / 2	4 / 16	3 / 6
5:00	6 / 23	15 / 46	0 / 4	0 / 2	6 / 22	5 / 11
5:15	5 / 28	17 / 63	0 / 4	1 / 3	8 / 30	1 / 12
5:30	6 / 34	9 / 72	0 / 4	0 / 3	8 / 38	4 / 16
5:45	1 / 35	10 / 82	0 / 4	0 / 3	9 / 47	3 / 19
6:00	4 / 39	10 / 92	0 / 4	0 / 3	4 / 51	4 / 23
	In	Out	Total		97-036	
	52	63	115			

SET-UP INSTRUCTIONS

1. Locate landmarks on each corner of the intersection diagram.
INDICATE NORTH!
2. Label street names in intersection diagram and count table.
3. Circle movement numbers being counted on the intersection diagram and assign one to each of the columns in the count table.
4. Label the approach street name and movement type for each movement in the count table.
5. Record the times at which counts will be recorded in the count table, including the times the survey is started and completed.

In Ou
10
21
6
12
13
14
10
8

COUNTING INSTRUCTIONS

1. Record the initial counts displayed on the count board at the start of the survey in the first row of the count table (many times this is zero but not necessarily).
2. Record the counts every fifteen minutes in the row with the time at which the count is recorded. DO NOT RESET THE COUNT BOARD DURING A COUNT!
3. Do not forget to record the final count at the end of the survey.

PROJECT: Town & Country

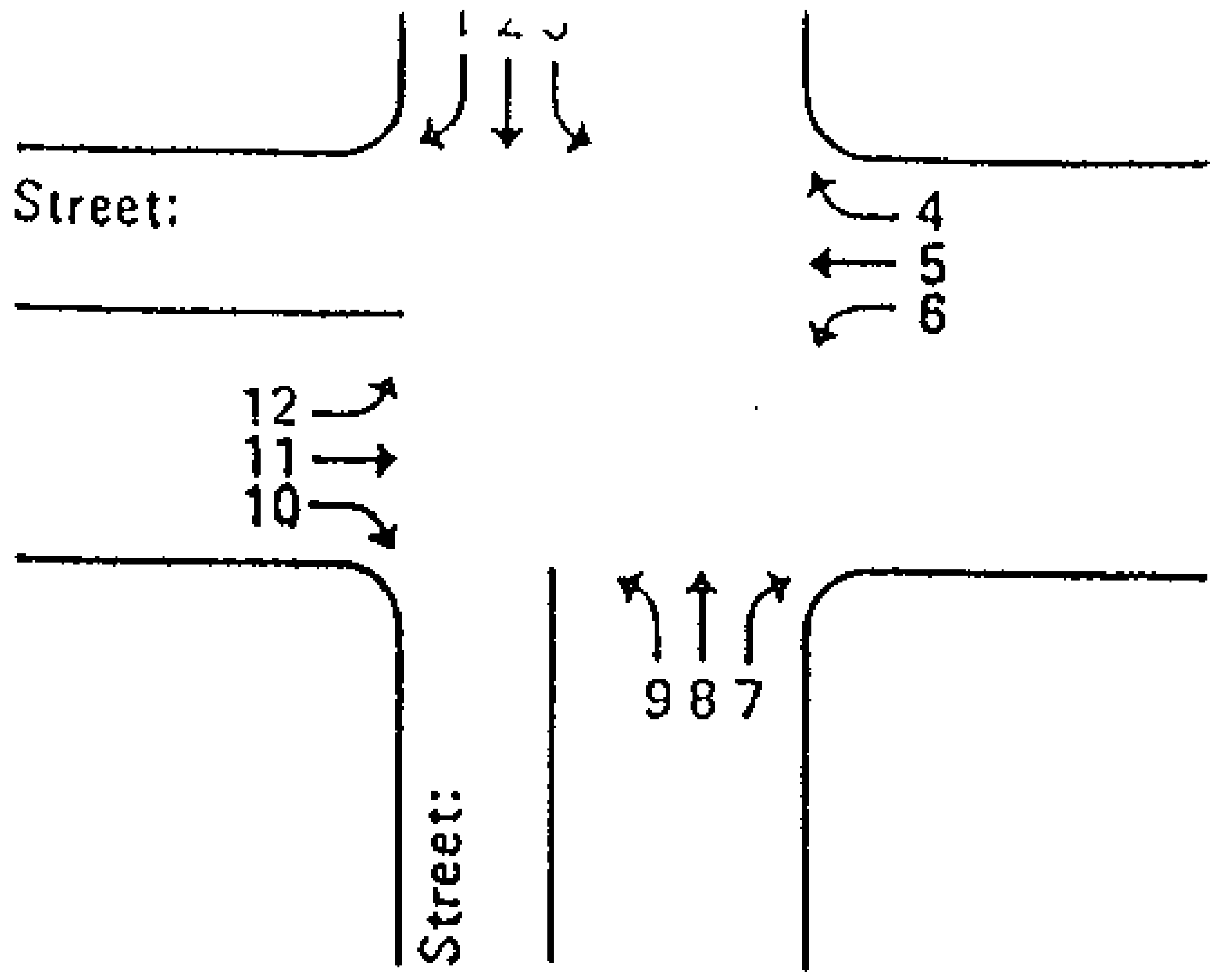
INTERSECTION: Courtesy Chevrolet

NAME: Ann BORG

DATE: 10-4-97

DAY OF WEEK: Sat. 2-4 pm

WEATHER: [illegible]



COUNT TABLE

STREET NAME OF APPROACH	Otter Creek											
MOVEMENT TYPE (Right, Thru, Left)												
MOVEMENT NUMBER (1-2-3-4-etc.)		In	Out									
TIME OF RECORDED COUNT:	COUNTS:	COUNTS:	COUNTS:	COUNTS:	COUNTS:	COUNTS:	COUNTS:	COUNTS:	COUNTS:	COUNTS:	COUNTS:	COUNTS:
2:00		0	0		TOT	AV						
2:15		2/2	4/4		8	8						
2:30	97-036	6/8	1/5		8	7						
2:45		2/10	6/11		8	10	IN	OUT	TOTAL			
3:00		4/14	3/14		14	10	44	43	87			
3:15		4/18	4/18		14	12						
3:30		3/21	3/21		8	11						
3:45		4/25	9/30		9	13						
4:00		3/28	7/37		8	13						

PROJECT: Town & Country

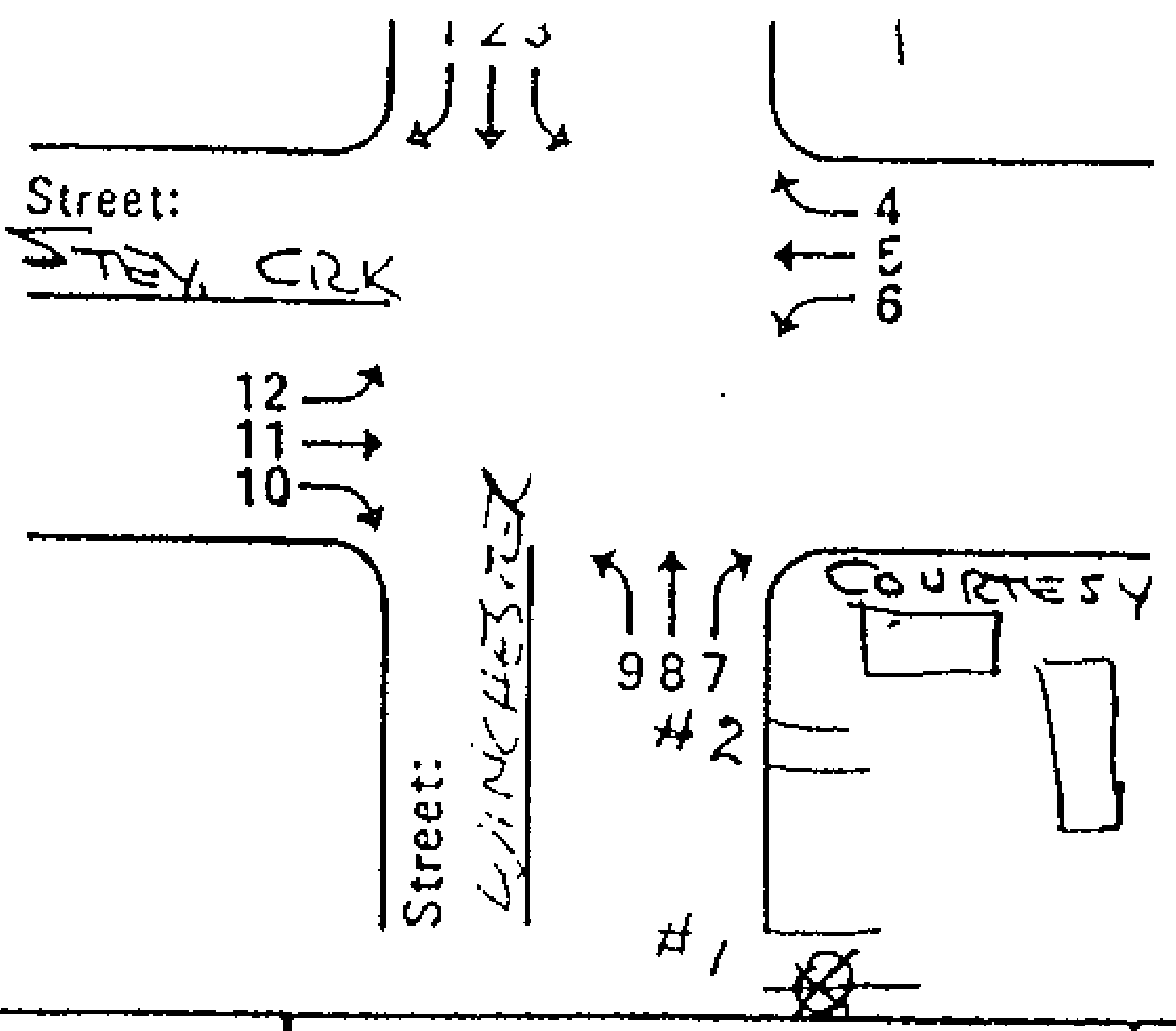
INTERSECTION: Courtesy Chevrolet

NAME:

DATE: 10-4-97

DAY OF WEEK: Sat. 2-4 p.m.

WEATHER: CLEAR



COUNT TABLE Driveways

STREET NAME OF APPROACH	Winchester #1			Winchester #2								
MOVEMENT TYPE (Right, Thru, Left)												
MOVEMENT NUMBER (1-2-3-4-etc.)		In	Out		In	Out						
TIME OF RECORDED COUNT:	COUNTS:	COUNTS:	COUNTS:	COUNTS:	COUNTS:	COUNTS:	COUNTS:	COUNTS:	COUNTS:	COUNTS:	COUNTS:	COUNTS:
2:00	97-036	0	0		0	0						
2:15		1/1	0/0		5/5	4/4						
2:30		2/3	3/3		0/5	3/7						
2:45		1/4	2/5		5/10	2/9						
3:00		2/6	2/7		8/18	5/14						
3:15		0/6	1/8		10/28	7/21						
3:30		1/7	0/8		4/32	0/21						
3:45		1/8	0/8		4/36	4/25						
4:00		1/9	1/9		4/40	3/28						

Location .... S. REDWOOD AVE. S/O STEVENS CREEK
Location Code 7
County .... SAN JOSE
Recorder Set 10/01/97 15:54
Recording Start ... 10/01/97 16:00
Recording End 10/06/97 11:15
Sample Time .... 15 Minutes
Operator Number ... 1
Machine Number ....
Channel 1
Divide By 2
Summation .... No
Two-Way .... No

Wednesday 10/01/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Total
																92	57	41	29	36	21	8	3	28
																23	22	9	10	9	7	4	1	
																22	11	20	7	14	4	1	1	
																22	7	2	6	5	9	1	0	
																25	17	10	6	8	1	2	1	

AM Peak Hour .... Unavailable
AM Peak Hour Factor .... Unavailable
PM Peak Hour .... 16:00 to 17:00 (92 vehicles)
PM Peak Hour Factor 92.0%

Thursday 10/02/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Total
2	0	2	1	5	2	4	25	43	69	79	78	75	86	85	83	76	57	42	33	38	28	20	1	93
1	0	1	0	0	0	1	6	11	18	10	21	20	14	31	16	25	19	14	9	13	14	10	0	
1	0	0	0	0	0	2	6	9	22	17	21	21	14	18	21	18	18	10	10	10	8	5	0	
0	0	1	1	4	1	1	7	8	11	29	19	20	23	16	30	21	11	10	6	7	4	4	0	
0	0	0	0	1	1	0	6	15	18	23	17	14	35	20	16	12	9	8	8	8	2	1	1	

AM Peak Hour .... 10:30 to 11:30 (94 vehicles)
AM Peak Hour Factor 81.0%
PM Peak Hour .... 13:30 to 14:30 (107 vehicles)
PM Peak Hour Factor 76.4%

24-Hour Moving Total

01:00–	N/A	02:00–	N/A	03:00–	N/A	04:00–	N/A	05:00–	N/A	06:00–	N/A	07:00–	N/A	08:00–	N/A
09:00–	N/A	10:00–	N/A	11:00–	N/A	12:00–	N/A	13:00–	N/A	14:00–	N/A	15:00–	N/A	16:00–	N/A
17:00–	926	18:00–	910	19:00–	910	20:00–	911	21:00–	915	22:00–	917	23:00–	924	24:00–	936

97-036

Friday 10/03/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Totals
1	0	4	0	3	1	3	30	46	56	72	82	112	103	115	94	105	71	69	33	13	23	7	7	1050
1	0	1	0	0	0	0	9	14	10	21	17	31	34	27	25	26	14	28	7	4	8	3	6	
0	0	0	0	2	0	0	1	7	17	18	20	34	27	21	27	33	28	15	9	2	3	0	1	
0	0	0	0	1	1	2	10	4	16	15	25	16	21	33	22	28	13	14	4	4	1	1	0	
0	0	3	0	0	0	1	10	21	13	18	20	31	21	34	20	18	16	12	13	3	11	3	0	

AM Peak Hour .... 11:00 to 12:00 (82 vehicles)
AM Peak Hour Factor 82.0%
PM Peak Hour .... 14:30 to 15:30 (119 vehicles)
PM Peak Hour Factor 87.5%

24-Hour Moving Total

01:00-	933	02:00-	933	03:00-	935	04:00-	934	05:00-	932	06:00-	931	07:00-	930	08:00-	935
09:00-	938	10:00-	925	11:00-	918	12:00-	922	13:00-	959	14:00-	976	15:00-	1006	16:00-	1017
17:00-	1046	18:00-	1060	19:00-	1087	20:00-	1087	21:00-	1062	22:00-	1057	23:00-	1044	24:00-	1050

Saturday 10/04/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Totals
5	2	2	2	2	2	6	11	22	58	52	63	102	65	58	54	40	30	32	37	34	21	11	6	717
4	0	1	1	0	0	0	3	4	15	12	19	28	23	9	17	13	6	6	9	13	4	2	3	
1	0	0	0	0	0	0	2	3	15	12	4	24	19	20	13	7	9	7	16	7	3	3	2	
0	0	1	1	1	2	0	2	8	14	17	21	25	8	24	12	15	9	8	8	7	8	3	0	
0	2	0	0	1	0	6	4	7	14	11	19	24	15	5	12	5	6	11	4	7	6	3	1	

AM Peak Hour .... 11:00 to 12:00 (63 vehicles)
AM Peak Hour Factor 75.0%
PM Peak Hour .... 12:00 to 13:00 (102 vehicles)
PM Peak Hour Factor 91.1%

24-Hour Moving Total

01:00-	1054	02:00-	1056	03:00-	1054	04:00-	1056	05:00-	1055	06:00-	1056	07:00-	1059	08:00-	1040
09:00-	1016	10:00-	1018	11:00-	998	12:00-	979	13:00-	969	14:00-	931	15:00-	874	16:00-	834
17:00-	769	18:00-	728	19:00-	691	20:00-	695	21:00-	716	22:00-	714	23:00-	718	24:00-	717

Sunday 10/05/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Totals
3	3	1	1	2	3	0	8	9	23	12	25	58	112	81	44	51	24	23	13	9	8	1	3	522
1	2	1	0	0	2	0	4	1	2	2	4	16	24	20	9	9	8	3	7	1	1	1	1	
0	0	0	0	2	0	0	0	4	4	4	6	9	31	18	8	19	5	8	1	3	5	0	0	
0	0	0	0	0	1	0	1	0	7	1	5	21	29	22	12	10	4	5	3	5	2	0	0	
2	1	0	1	0	0	0	3	4	10	5	10	12	28	21	15	13	7	7	2	0	0	0	2	

AM Peak Hour .... 11:00 to 12:00 (25 vehicles)
AM Peak Hour Factor 62.5%
PM Peak Hour .... 13:00 to 14:00 (112 vehicles)
PM Peak Hour Factor 90.3%

24-Hour Moving Total

01:00-	715	02:00-	716	03:00-	715	04:00-	714	05:00-	714	06:00-	715	07:00-	709	08:00-	706
09:00-	693	10:00-	658	11:00-	618	12:00-	590	13:00-	535	14:00-	583	15:00-	606	16:00-	596
17:00-	507	18:00-	601	19:00-	597	20:00-	573	21:00-	548	22:00-	535	23:00-	525	24:00-	522

Monday 10/06/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Totals
0	0	0	0	6	0	9	30	56	56	87	16													260
0	0	0	0	4	0	1	4	12	10	22	16													
0	0	0	0	0	0	5	4	12	14	30														
0	0	0	0	1	0	2	7	16	15	20														
0	0	0	0	1	0	1	15	16	17	15														

AM Peak Hour .... 09:45 to 10:45 (89 vehicles)
AM Peak Hour Factor 74.2%
PM Peak Hour .... Unavailable
PM Peak Hour Factor .... Unavailable

24-Hour Moving Total

01:00-	519	02:00-	516	03:00-	515	04:00-	514	05:00-	518	06:00-	515	07:00-	524	08:00-	546
09:00-	593	10:00-	626	11:00-	701	12:00-	N/A	13:00-	N/A	14:00-	N/A	15:00-	N/A	16:00-	N/A
17:00-	N/A	18:00-	N/A	19:00-	N/A	20:00-	N/A	21:00-	N/A	22:00-	N/A	23:00-	N/A	24:00-	N/A

Location .... HEMLOCK AVE. W/O S. MONROE ST.
Location Code 8
County .... SAN JOSE
Recorder Set 10/01/97 16:05
Recording Start ... 10/01/97 17:00
Recording End 10/06/97 11:00
Sample Time .... 15 Minutes
Operator Number ... 1
Machine Number 97
Channel 1
Divide By 2
Summation .... No
Two-Way .... No

Wednesday 10/01/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Totals
																	179	134	79	45	21	15	8	481
																	54	50	34	13	6	4	2	
																	49	39	15	17	5	3	0	
																	38	25	15	4	4	3	3	
																	38	20	15	11	6	5	3	

AM Peak Hour .... Unavailable
AM Peak Hour Factor .... Unavailable
PM Peak Hour .... 17:00 to 18:00 (179 vehicles)
PM Peak Hour Factor 82.9%

Thursday 10/02/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Totals
5	4	4	5	2	8	45	67	86	100	169	125	122	108	84	134	147	138	101	70	40	44	20	9	1637
2	2	1	0	0	2	2	15	17	33	35	40	36	25	26	22	40	43	25	28	7	16	10	4	
2	0	1	1	0	2	10	15	24	22	17	28	24	22	15	47	33	32	23	13	7	8	4	0	
0	0	1	4	2	3	20	26	16	15	28	21	35	30	21	32	42	33	25	11	13	9	3	3	
1	2	1	0	0	1	13	11	29	30	88	36	27	31	22	33	32	30	28	18	13	11	3	2	

AM Peak Hour .... 10:30 to 11:30 (184 vehicles)
AM Peak Hour Factor 52.3%
PM Peak Hour .... 15:15 to 16:15 (152 vehicles)
PM Peak Hour Factor 80.9%

24-Hour Moving Total

01:00–	N/A	02:00–	N/A	03:00–	N/A	04:00–	N/A	05:00–	N/A	06:00–	N/A	07:00–	N/A	08:00–	N/A
09:00–	N/A	10:00–	N/A	11:00–	N/A	12:00–	N/A	13:00–	N/A	14:00–	N/A	15:00–	N/A	16:00–	N/A
17:00–	N/A	18:00–	1696	19:00–	1655	20:00–	1622	21:00–	1613	22:00–	1608	23:00–	1631	24:00–	1636

97-036

Friday 10/03/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Totals
5	3	3	4	2	7	27	51	73	106	91	106	137	134	117	137	112	151	121	64	45	29	27	12	1565
0	0	0	2	1	1	0	14	15	27	24	19	33	31	35	34	24	36	39	21	14	7	6	2	
1	0	1	0	0	0	6	10	21	20	19	27	37	36	23	32	34	44	28	12	13	8	8	6	
1	1	0	2	1	4	10	13	9	24	20	28	32	36	20	37	29	43	25	18	13	5	8	1	
3	2	2	0	0	2	11	14	28	35	28	32	35	31	39	34	25	28	29	13	5	9	5	3	

AM Peak Hour .... 09:00 to 10:00 (106 vehicles)
AM Peak Hour Factor 75.7%
PM Peak Hour .... 17:15 to 18:15 (154 vehicles)
PM Peak Hour Factor 87.5%

24-Hour Moving Total

01:00-	1638	02:00-	1637	03:00-	1636	04:00-	1635	05:00-	1635	06:00-	1634	07:00-	1616	08:00-	1600
09:00-	1587	10:00-	1593	11:00-	1515	12:00-	1496	13:00-	1511	14:00-	1537	15:00-	1570	16:00-	1573
17:00-	1538	18:00-	1551	19:00-	1571	20:00-	1565	21:00-	1570	22:00-	1555	23:00-	1562	24:00-	1565

Saturday 10/04/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Totals
4	5	5	2	3	1	9	21	29	54	74	87	108	99	108	106	96	98	86	67	37	34	35	13	1181
1	2	5	1	1	0	3	2	5	8	17	19	23	29	20	42	28	17	10	17	14	9	9	0	
0	2	0	0	1	0	1	6	8	12	22	27	23	30	32	24	25	33	23	17	7	7	11	4	
2	0	0	1	0	1	2	9	8	21	18	16	23	18	31	22	26	28	29	24	11	13	8	6	
1	1	0	0	1	0	3	4	8	13	17	25	39	22	25	18	17	20	24	9	5	5	7	3	

AM Peak Hour .... 11:00 to 12:00 (87 vehicles)
AM Peak Hour Factor 80.6%
PM Peak Hour .... 14:15 to 15:15 (130 vehicles)
PM Peak Hour Factor 77.4%

24-Hour Moving Total

01:00-	1563	02:00-	1565	03:00-	1567	04:00-	1565	05:00-	1566	06:00-	1560	07:00-	1542	08:00-	1512
09:00-	1468	10:00-	1416	11:00-	1399	12:00-	1380	13:00-	1351	14:00-	1316	15:00-	1307	16:00-	1276
17:00-	1260	18:00-	1207	19:00-	1172	20:00-	1175	21:00-	1167	22:00-	1172	23:00-	1180	24:00-	1181

Sunday 10/05/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Totals
6	5	5	2	1	3	2	4	21	28	37	53	69	103	115	93	77	60	43	33	20	12	10	9	821
2	1	0	1	1	3	0	1	[illegible]	7	4	13	4	[illegible]	11	12	27	15	15	5	6	4	4	2	
0	1	0	0	0	0	0	0	6	2	11	16	15	22	36	10	23	14	10	12	7	5	0	3	
3	2	3	0	0	0	1	3	4	8	8	15	12	26	21	28	16	21	5	10	4	2	3	0	
1	1	2	1	0	0	1	1	6	11	14	9	27	22	33	25	11	10	9	6	3	1	3	4	

AM Peak Hour .... 10:45 to 11:45 (58 venicles)
AM Peak Hour Factor 90.6%
PM Peak Hour .... 13:30 to 14:30 (119 vehicles)
PM Peak Hour Factor 82.6%

24-Hour Moving Total

01:00-	1185	02:00-	1185	03:00-	1185	04:00-	1185	05:00-	1183	06:00-	1185	07:00-	1178	08:00-	1161
09:00-	1153	10:00-	1127	11:00-	1090	12:00-	1056	13:00-	1017	14:00-	1027	15:00-	1034	16:00-	1023
17:00-	1004	18:00-	966	19:00-	923	20:00-	889	21:00-	872	22:00-	850	23:00-	825	24:00-	821

Monday 10/06/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Total
3	2	1	0	1	3	34	31	0	10	70														15
1	0	0	0	0	2	4	15	0	0	22														
2	0	0	0	0	0	10	16	0	1	17														
0	0	1	0	0	0	7	0	0	0	14														
0	2	0	0	1	1	13	0	0	9	17														

AM Peak Hour .... 10:00 to 11:00 (70 vehicles)
AM Peak Hour Factor 79.5%
PM Peak Hour .... Unavailable
PM Peak Hour Factor .... Unavailable

24-Hour Moving Total

01:00-	816	02:00-	813	03:00-	809	04:00-	807	05:00-	807	06:00-	807	07:00-	839	08:00-	866
09:00-	845	10:00-	827	11:00-	860	12:00-	N/A	13:00-	N/A	14:00-	N/A	15:00-	N/A	16:00-	N/A
17:00-	N/A	18:00-	N/A	19:00-	N/A	20:00-	N/A	21:00-	N/A	22:00-	N/A	23:00-	N/A	24:00-	N/A

97-036

Location .... DUDLEY AVE. N/O TISCH WAY
Location Code 9
County .... SAN JOSE
Recorder Set 10/01/97 16:16
Recording Start ... 10/01/97 17:00
Recording End 10/06/97 11:15
Sample Time .... 15 Minutes
Operator Number ... 1
Machine Number 70
Channel 1
Divide By 2
Summation .... No
Two-Way .... No

Wednesday 10/01/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Totals
																	45	55	18	8	6	2	2	136
																	13	21	13	2	1	0	0	
																	10	4	3	1	0	1	0	
																	11	7	2	2	4	1	0	
																	11	23	0	3	1	0	2	

AM Peak Hour .... Unavailable
AM Peak Hour Factor .... Unavailable
PM Peak Hour .... 18:00 to 19:00 (55 vehicles)
PM Peak Hour Factor 59.8%

Thursday 10/02/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Totals
2	6	2	0	0	1	2	9	93	16	33	38	38	50	17	11	42	30	25	12	8	16	0	0	451
0	0	1	0	0	0	0	3	13	3	8	16	6	19	0	4	14	10	6	0	2	13	0	0	
0	5	1	0	0	0	2	0	39	1	9	12	9	14	4	2	15	7	3	4	2	0	0	0	
0	0	0	0	0	0	0	1	23	4	9	6	14	10	6	[illegible]	9	4	9	3	1	2	0	0	
2	0	0	0	0	1	0	5	18	8	7	4	9	7	7	3	4	9	7	5	3	1	0	0	

AM Peak Hour .... 08:00 to 09:00 (93 vehicles)
AM Peak Hour Factor 59.6%
PM Peak Hour .... 12:30 to 13:30 (56 vehicles)
PM Peak Hour Factor 73.7%

24-Hour Moving Total

01:00–	N/A	02:00–	N/A	03:00–	N/A	04:00–	N/A	05:00–	N/A	06:00–	N/A	07:00–	N/A	08:00–	N/A
09:00–	N/A	10:00–	N/A	11:00–	N/A	12:00–	N/A	13:00–	N/A	14:00–	N/A	15:00–	N/A	16:00–	N/A
17:00–	N/A	18:00–	496	19:00–	481	20:00–	451	21:00–	445	22:00–	445	23:00–	455	24:00–	453

Friday 10/03/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Totals
0	0	0	0	0	0	0	11	68	22	10	32	38	27	12	23	37	21	7	8	0	9	12	2	339
0	0	0	0	0	0	0	3	13	15	4	5	9	10	5	5	15	10	4	3	0	3	2	0	
0	0	0	0	0	0	0	2	21	1	3	7	12	7	3	3	9	4	0	0	0	1	2	1	
0	0	0	0	0	0	0	1	23	5	1	10	8	2	2	7	4	2	2	2	0	4	3	0	
0	0	0	0	0	0	0	5	11	1	2	10	9	8	2	8	9	5	1	3	0	1	5	1	

AM Peak Hour .... 08:00 to 09:00 (68 vehicles)
AM Peak Hour Factor 73.9%
PM Peak Hour .... 12:15 to 13:15 (39 vehicles)
PM Peak Hour Factor 81.3%

24-Hour Moving Total

01:00-	449	02:00-	443	03:00-	441	04:00-	441	05:00-	441	06:00-	440	07:00-	438	08:00-	440
09:00-	415	10:00-	419	11:00-	396	12:00-	390	13:00-	390	14:00-	357	15:00-	362	16:00-	374
17:00-	369	18:00-	360	19:00-	344	20:00-	340	21:00-	332	22:00-	325	23:00-	337	24:00-	339

Saturday 10/04/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Totals
1	1	1	0	0	3	3	13	38	16	23	15	32	19	24	5	8	4	4	7	2	3	3	0	225
1	0	0	0	0	0	1	2	12	6	3	2	7	3	18	2	3	2	2	5	0	0	2	0	
0	0	0	0	0	1	2	3	9	2	5	5	11	4	4	1	3	2	1	0	0	0	1	0	
0	0	1	0	0	0	0	1	9	5	0	5	9	3	0	1	2	0	0	1	2	2	0	0	
0	1	0	0	0	2	0	7	8	3	15	3	5	9	2	1	0	0	1	1	0	1	0	0	

AM Peak Hour .... 08:00 to 09:00 (38 vehicles)
AM Peak Hour Factor 79.2%
PM Peak Hour .... 13:15 to 14:15 (34 vehicles)
PM Peak Hour Factor 47.2%

24-Hour Moving Total

01:00-	340	02:00-	341	03:00-	342	04:00-	342	05:00-	342	06:00-	345	07:00-	348	08:00-	350
09:00-	320	10:00-	316	11:00-	329	12:00-	312	13:00-	306	14:00-	298	15:00-	310	16:00-	292
17:00-	253	18:00-	246	19:00-	241	20:00-	240	21:00-	242	22:00-	236	23:00-	227	24:00-	225

Sunday 10/05/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Totals
0	1	0	0	1	0	2	10	15	0	7	12	4	7	5	12	18	16	8	4	4	4	1	0	131
0	0	0	0	1	0	1	0	4	0	4	4	1	4	4	4	4	1	2	0	1	0	0	0	
0	0	0	0	0	0	1	0	7	0	1	4	1	0	1	2	9	2	4	2	0	0	1	0	
0	1	0	0	0	0	0	3	4	0	2	4	2	2	0	1	3	10	2	2	1	0	0	0	
0	0	0	0	0	0	0	7	0	0	0	0	0	1	0	5	2	3	0	0	2	4	0	0	

AM Peak Hour .... 07:45 to 08:45 (23 vehicles)
AM Peak Hour Factor 82.1%
PM Peak Hour .... 15:45 to 16:45 (21 vehicles)
PM Peak Hour Factor 58.3%

24-Hour Moving Total

01:00-	224	02:00-	224	03:00-	223	04:00-	223	05:00-	223	06:00-	220	07:00-	219	08:00-	216
09:00-	194	10:00-	178	11:00-	162	12:00-	159	13:00-	133	14:00-	121	15:00-	102	16:00-	107
17:00-	117	18:00-	129	19:00-	133	20:00-	130	21:00-	132	22:00-	133	23:00-	131	24:00-	131

Monday 10/06/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Totals
0	0	0	0	2	0	3	14	59	17	11	0													106
0	0	0	0	0	0	0	1	12	3	1	0													
0	0	0	0	0	0	0	4	27	7	2														
0	0	0	0	1	0	3	3	17	4	3														
0	0	0	0	1	0	0	6	3	3	5														

AM Peak Hour .... 07:45 to 08:45 (62 vehicles)
AM Peak Hour Factor 57.4%
PM Peak Hour .... Unavailable
PM Peak Hour Factor .... Unavailable

24-Hour Moving Total

01:00-	131	02:00-	130	03:00-	130	04:00-	130	05:00-	132	06:00-	132	07:00-	133	08:00-	137
09:00-	180	10:00-	197	11:00-	201	12:00-	N/A	13:00-	N/A	14:00-	N/A	15:00-	N/A	16:00-	N/A
17:00-	N/A	18:00-	N/A	19:00-	N/A	20:00-	N/A	21:00-	N/A	22:00-	N/A	23:00-	N/A	24:00-	N/A

97-036

Location .... S. BAYWOOD AVE. N/O TISCH WAY
Location Code 10
County .... SAN JOSE
Recorder Set 10/01/97 16:26
Recording Start ... 10/01/97 17:00
Recording End 10/06/97 11:15
Sample Time .... 15 Minutes
Operator Number ... 1
Machine Number ....
Channel 1
Divide By 2
Summation .... No
Two-Way .... No

Wednesday 10/01/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Total
																	244	214	66	59	112	28	8	73
																	58	65	27	18	14	9	5	
																	45	76	15	9	37	4	1	
																	80	49	12	7	50	5	1	
																	61	24	12	25	11	10	1	

AM Peak Hour .... Unavailable
AM Peak Hour Factor .... Unavailable
PM Peak Hour .... 17:30 to 18:30 (282 vehicles)
PM Peak Hour Factor 88.1%

Thursday 10/02/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Total
6	9	16	0	5	9	24	77	155	128	74	130	198	152	108	104	141	210	199	49	58	111	16	9	199
1	1	3	0	3	2	2	11	37	48	21	19	54	50	31	22	28	61	53	11	12	25	4	2	
2	4	7	0	0	0	6	20	43	29	23	49	60	32	39	23	32	39	84	16	13	33	9	3	
0	1	5	0	1	0	10	24	57	17	12	27	32	41	17	25	48	62	37	11	16	28	1	2	
3	3	1	0	2	7	6	22	28	34	18	35	52	29	21	29	33	48	25	11	17	25	2	2	

AM Peak Hour .... 08:15 to 09:15 (176 vehicles)
AM Peak Hour Factor 77.2%
PM Peak Hour .... 17:30 to 18:30 (247 vehicles)
PM Peak Hour Factor 73.5%

24-Hour Moving Total

01:00–	N/A	02:00–	N/A	03:00–	N/A	04:00–	N/A	05:00–	N/A	06:00–	N/A	07:00–	N/A	08:00–	N/A
09:00–	N/A	10:00–	N/A	11:00–	N/A	12:00–	N/A	13:00–	N/A	14:00–	N/A	15:00–	N/A	16:00–	N/A
17:00–	N/A	18:00–	2078	19:00–	2044	20:00–	2029	21:00–	2012	22:00–	2011	23:00–	2010	24:00–	1998

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Friday 10/03/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Totals
10	2	18	7	11	10	22	84	167	129	142	122	173	158	133	145	173	116	77	47	31	22	19	8	1826
3	2		1	1	2	2	13	31	44	20	37	45	42	35	29	46	8	22	20	6	5	7	2	
3	0	5	1	6	1	5	9	40	32	47	22	40	46	36	32	32	42	16	11	12	7	3	1	
3	0	8	0	1	2	4	22	53	26	37	35	43	30	29	40	37	44	20	8	5	9	3	4	
1	0	5	1	3	5	11	40	43	27	38	28	45	40	33	44	58	22	19	8	8	1	6	1	

AM Peak Hour .... 08:15 to 09:15 (180 vehicles)
AM Peak Hour Factor 84.9%
PM Peak Hour .... 12:30 to 13:30 (176 vehicles)
PM Peak Hour Factor 95.7%

24-Hour Moving Total

01:00- 2003	02:00- 1996	03:00- 1998	04:00- 2005	05:00- 2010	06:00- 2011	07:00- 2009	08:00- 2016
09:00- 2018	10:00- 2019	11:00- 2087	12:00- 2079	13:00- 2054	14:00- 2060	15:00- 2085	16:00- 2126
17:00- 2158	18:00- 2064	19:00- 1942	20:00- 1940	21:00- 1913	22:00- 1824	23:00- 1827	24:00- 1826

Saturday 10/04/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Totals
14	11	8	2	2	4	1	9	105	62	33	42	107	63	90	44	104	58	31	25	23	21	17	16	892
1	0	4	1	2	2	0	3	20	34	7	6	33	16	19	13	24	18	12	5	10	8	6	5	
6	8	0	0	0	0	0	0	17	14	10	7	18	15	21	9	27	22	6	7	7	7	6	8	
1	0	2	0	0	2	1	2	24	9	8	10	25	11	25	8	21	7	4	7	6	4	4	0	
6	3	2	1	0	0	0	4	44	5	8	19	31	21	25	14	32	11	9	6	0	2	1	3	

AM Peak Hour .... 08:15 to 09:15 (119 vehicles)
AM Peak Hour Factor 67.6%
PM Peak Hour .... 12:00 to 13:00 (107 vehicles)
PM Peak Hour Factor 81.1%

24-Hour Moving Total

01:00- 1830	02:00- 1839	03:00- 1829	04:00- 1824	05:00- 1815	06:00- 1809	07:00- 1788	08:00- 1713
09:00- 1651	10:00- 1584	11:00- 1475	12:00- 1395	13:00- 1329	14:00- 1234	15:00- 1191	16:00- 1090
17:00- 1021	18:00- 963	19:00- 917	20:00- 895	21:00- 887	22:00- 886	23:00- 884	24:00- 892

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Sunday 10/05/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Total
14	10	4	3	0	[illegible]	2	7	7	17	18	20	32	33	34	24	43	27	5	30	20	12	16	9	40
5	[illegible]	3	[illegible]	1	1	1	[illegible]	2	[illegible]	[illegible]	5	[illegible]	[illegible]	[illegible]	1	18	12	1	5	6	3	2	4	
2	4	0	[illegible]	0	[illegible]	1	[illegible]	2	2	5	2	6	3	16	10	8	[illegible]	0	12	4	6	9	5	
3	7	1	0	0	0	0	[illegible]	1	3	3	10	0	12	9	5	5	7	2	8	5	2	2	0	
4	0	3	1	1	1	2	4	0	11	3	8	13	7	3	5	10	7	0	4	5	1	3	0	

AM Peak Hour .... 09:30 to 10:30 (26 vehicles)
AM Peak Hour Factor 59.1%
PM Peak Hour .... 12:45 to 13:45 (45 vehicles)
PM Peak Hour Factor 86.5%

24-Hour Moving Total

01:00–	892	02:00–	893	03:00–	889	04:00–	890	05:00–	890	06:00–	887	07:00–	888	08:00–	886
09:00–	788	10:00–	743	11:00–	728	12:00–	712	13:00–	537	14:00–	513	15:00–	557	16:00–	537
17:00–	476	18:00–	445	19:00–	419	20:00–	424	21:00–	421	22:00–	412	23:00–	411	24:00–	404

Monday 10/06/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Tota
8	4	1	3	5	13	21	91	202	120	65	24													5
0	0	1	0	2	3	3	14	34	34	17	24													
2	1	0	1	4	4	2	14	68	33	14														
1	1	0	0	0	1	3	27	49	29	16														
5	0	0	2	0	5	12	36	51	24	9														

AM Peak Hour .... 08:00 to 09:00 (202 vehicles)
AM Peak Hour Factor 74.3%
PM Peak Hour .... Unavailable
PM Peak Hour Factor .... Unavailable

24-Hour Moving Total

01:00–	398	02:00–	390	03:00–	387	04:00–	387	05:00–	391	06:00–	403	07:00–	422	08:00–	506
09:00–	701	10:00–	804	11:00–	842	12:00–	N/A	13:00–	N/A	14:00–	N/A	15:00–	N/A	16:00–	N/A
17:00–	N/A	18:00–	N/A	19:00–	N/A	20:00–	N/A	21:00–	N/A	22:00–	N/A	23:00–	N/A	24:00–	N/A

```
FROM : TRAFFIC DATA SERVICE          PHONE NO. : [illegible]          Aug. 16 1997 05:11PM

Weekly Summary Report
Generated by MSC3000 Version 2.00     Copyright [illegible] Mitron Systems Corporation

Location .......... STEVENS CREEK E/O BAYWOOD (EB)
Location Code ..... 1
County ............ SAN JOSE
Recorder Set ...... 08/08/97 12:19
Recording Start ... 08/08/97 13:00
Recording End ..... 08/16/97 16:30
Sample Time ....... 15 Minutes
Operator Number ... 1
Machine Number .... 66
Channel ........... 1
Recorder Mode ..... Volume
--------------------------------------------------------------------------------
Week of August 3, 1997.   Channel: 1   Direction: E

   End      3      4      5      6      7      8      9    Wkday    Daily
   Time   _Sun_  _Mon_  _Tue_  _Wed_  _Thu_  _Fri_  _Sat_  _Avg._   _Avg._

   01:00                                         489              489
   02:00                                         192              192
   03:00                                         145              145
   04:00                                          79               79
   05:00                                          64               64
   06:00                                         112              112
   07:00                                         141              141
   08:00                                         317              317
   09:00                                         577              577
   10:00                                         819              819
   11:00                                        1218             1218
   12:00                                        1682             1682
   13:00                                        1857             1857
   14:00                                 2118   1953    2118     2036
   15:00                                 2080   2037    2080     2059
   16:00                                 1940   2159    1940     2050
   17:00                                 2031   2104    2031     2068
   18:00                                 2042   1942    2042     1992
   19:00                                 1811   1739    1811     1775
   20:00                                 1681   1384    1681     1533
   21:00                                 1556   1154    1556     1355
   22:00                                 1496   1122    1496     1309
   23:00                                 1066    784    1066      925
   24:00  _____  _____  _____  _____  _____  _772_  _703_  _772_   _738_

   Totals                               18593  24773   18593    25529
--------------------------------------------------------------------------------
 % Avg Wkday                            100.0  133.2
 % Avg Day                               72.8   97.0

 AM Peak Hr                                    12:00
 AM Count                                       1682

 PM Peak Hr                             14:00  16:00
 PM Count                                2118   2159
--------------------------------------------------------------------------------
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Weekly Summary Report

Page

Location .... STEVENS CREEK E/O BAYWOOD (EB)
Location Code 1
County .... SAN JOSE
Recorder Set 08/08/97 12:19
Recording Start ... 08/08/97 13:00
Recording End 08/16/97 16:30
Sample Time .... 15 Minutes
Operator Number ... 1
Machine Number 66
Channel 1
Recorder Mode ..... Volume

Week of August 10, 1997. Channel: 1 Direction: E

End Time	10 Sun	11 Mon	12 Tue	13 Wed	14 Thu	15 Fri	16 Sat	Wkday Avg.	Daily Avg.
01:00	473	218	202	205	215	226	573	213	302
02:00	158	97	95	91	106	93	206	96	121
03:00	116	58	61	57	63	60	121	60	77
04:00	62	38	42	55	58	60	74	51	56
05:00	59	79	74	71	72	76	71	74	72
06:00	59	153	180	145	171	168	90	163	138
07:00	114	355	360	383	351	341	148	358	293
08:00	202	578	613	572	573	610	298	589	492
09:00	320	706	762	765	789	817	537	768	671
10:00	485	861	900	835	915	947	841	892	826
11:00	727	1139	1108	1059	1128	1367	1250	1160	1111
12:00	1072	1337	1343	1346	1342	1708	1625	1415	1396
13:00	1439	1785	1726	1686	1806	2083	1890	1817	1774
14:00	1699	1945	1915	1870	1953	2233	2010	1983	1946
15:00	1899	1818	1906	1805	1861	2138	2028	1906	1922
16:00	1969	1841	1761	1863	1884	2061	854	1882	1748
17:00	1936	1869	1905	1786	1858	2018		1887	1895
18:00	1795	1868	1899	1859	1906	2165		1939	1915
19:00	1481	1715	1786	1770	1744	1886		1780	1730
20:00	1246	1449	1442	1558	1541	1716		1541	1492
21:00	859	1308	1397	1486	1486	1494		1434	1338
22:00	797	1183	1251	1338	1391	1463		1325	1237
23:00	488	638	739	802	795	1063		807	754
24:00	390	374	386	436	419	565		436	428
Totals	19845	23412	23853	23843	24427	27358	12616	24579	23735
% Avg Wkday	80.7	95.3	97.0	97.0	99.4	111.3	51.3		
% Avg Day	83.6	98.6	100.5	100.5	102.9	115.3	53.2		
AM Peak Hr	12:00	12:00	12:00	12:00	12:00	12:00	12:00		
AM Count	1072	1337	1343	1346	1342	1708	1625		
PM Peak Hr	16:00	14:00	14:00	14:00	14:00	14:00	15:00		
PM Count	1969	1945	1915	1870	1953	2233	2028		

97-036

RECEIVED
AUG 1 [illegible] 1997
BARTON-ASCHMA

Volume Count Report

Generated by MSC3000 Version 2.00 Copyright 1990, 1991 Mitron Systems Corporation

Location .... STEVENS CREEK E/O BAYWOOD EB)
Location Code 1
County .... SAN JOSE
Recorder Set 08/08/97 12:19
Recording Start ... 08/08/97 13:00
Recording End 08/16/97 16:30
Sample Time .... 15 Minutes
Operator Number ... 1
Machine Number 66
Channel 1
Divide By 2
Summation .... No
Two-Way .... No

Friday 08/08/97 Channel: 1 Direction: E

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Total
													2118	2086	1940	2031	2042	1911	1691	1556	1496	1066	772	18593
													[illegible]	[illegible]	[illegible]	494	536	510	460	406	352	357	158	
													[illegible]	556	499	503	535	449	416	379	361	282	192	
													536	506	450	522	518	467	414	409	413	219	203	
													506	507	499	495	483	393	391	362	370	208	219	

AM Peak Hour .... Unavailable
AM Peak Hour Factor .... Unavailable
PM Peak Hour .... 13:30 to 14:30 (2133 vehicles)
PM Peak Hour Factor 95.9%

Saturday 08/09/97 Channel: 1 Direction: E

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Total
489	192	145	79	64	112	141	317	577	819	1218	1682	1857	1953	2037	2159	2104	1942	1739	1384	1154	1122	784	703	2477
106	59	40	20	14	21	28	59	126	163	279	362	438	473	536	530	537	507	457	413	282	299	290	163	
80	53	46	23	15	27	36	68	116	202	290	395	489	480	489	538	543	487	481	368	259	272	172	133	
92	38	39	19	14	25	39	90	158	197	293	445	472	495	507	554	518	480	436	292	306	317	167	212	
211	42	20	17	21	39	38	100	177	257	356	480	458	505	505	537	506	468	365	311	307	234	155	195	

AM Peak Hour .... 11:00 to 12:00 (1682 vehicles)
AM Peak Hour Factor 87.6%
PM Peak Hour .... 15:30 to 16:30 (2171 vehicles)
PM Peak Hour Factor 98.0%

24-Hour Moving Total

01:00– N/A 02:00– N/A 03:00– N/A 04:00– N/A 05:00– N/A 06:00– N/A 07:00– N/A 08:00– N/A
09:00– N/A 10:00– N/A 11:00– N/A 12:00– N/A 13:00– N/A 14:00– 26285 15:00– 26120 16:00– 26077
17:00– 26296 18:00– 26369 19:00– 26269 20:00– 26197 21:00– 25900 22:00– 25498 23:00– 25124 24:00– 24842

97-036

Sunday 08/10/97 Channel: 1 Direction: E

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Totals
473	158	116	62	59	59	114	202	320	485	727	1072	1439	1699	1899	1969	1936	1795	1481	1246	859	797	488	390	19845
108	44	39	23	17	13	16	47	33	85	125	247	372	404	451	504	456	500	413	403	227	203	184	83	
89	41	28	17	12	16	29	41	78	107	180	268	360	444	498	490	528	439	413	305	261	181	122	81	
77	40	24	13	18	13	32	53	92	145	200	284	344	427	468	454	474	465	326	299	197	249	98	125	
199	33	25	9	12	17	37	61	117	148	222	273	363	424	482	521	478	391	329	239	174	164	84	101	

AM Peak Hour .... 11:00 to 12:00 (1072 vehicles)
AM Peak Hour Factor 94.4%
PM Peak Hour .... 15:45 to 16:45 (1979 vehicles)
PM Peak Hour Factor 95.0%

24-Hour Moving Total

01:00- 24757	02:00- 24723	03:00- 24694	04:00- 24677	05:00- 24672	06:00- 24619	07:00- 24592	08:00- 24477
09:00- 24220	10:00- 23886	11:00- 23395	12:00- 22785	13:00- 22367	14:00- 22113	15:00- 21975	16:00- 21785
17:00- 21517	18:00- 21470	19:00- 21212	20:00- 21074	21:00- 20779	22:00- 20454	23:00- 20158	24:00- 19845

Monday 08/11/97 Channel: 1 Direction: E

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Total
218	97	58	38	79	153	355	578	706	861	1139	1337	1785	1945	1818	1841	1869	1868	1715	1449	1308	1183	638	374	23412
58	40	19	7	19	30	56	97	159	197	302	311	419	504	453	439	452	470	464	381	347	344	242	108	
55	20	15	10	9	26	90	155	179	206	269	350	430	495	476	435	455	474	458	397.	347	320	146	90	
30	20	14	10	22	36	94	153	177	225	284	316	452	464	449	492	503	464	388	349	295	299	141	100	
75	17	10	11	29	61	115	173	191	233	284	360	484	482	440	475	459	460	405	322	319	220	109	76	

AM Peak Hour .... 11:00 to 12:00 (1337 vehicles)
AM Peak Hour Factor 92.8%
PM Peak Hour .... 12:45 to 13:45 (1947 vehicles)
PM Peak Hour Factor 96.6%

24-Hour Moving Total

01:00- 19590	02:00- 19529	03:00- 19471	04:00- 19447	05:00- 19467	06:00- 19561	07:00- 19802	08:00- 20178
09:00- 20564	10:00- 20940	11:00- 21352	12:00- 21617	13:00- 21963	14:00- 22209	15:00- 22128	16:00- 22000
17:00- 21933	18:00- 22006	19:00- 22240	20:00- 22443	21:00- 22892	22:00- 23278	23:00- 23428	24:00- 23412

97-036

Tuesday 08/12/97 Channel: [illegible] Direction: E

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Totals
202	95	61	42	74	180	360	613	762	900	1108	1343	1726	1915	1906	1761	1905	1899	1786	1442	1397	1251	739	386	23853
61	29	22	13	13	30	58	111	189	220	249	307	418	513	508	393	436	463	473	404	336	337	280	118	
64	22	17	11	12	35	91	159	180	230	268	314	430	493	484	463	502	496	473	355	372	326	182	81	
41	26	15	9	16	50	96	159	194	214	297	350	424	450	466	458	500	502	437	343	339	309	141	98	
35	18	7	9	33	65	115	184	199	236	294	372	454	459	448	447	467	438	403	340	350	279	136	89	

AM Peak Hour .... 11:00 to 12:00 (1343 vehicles)
AM Peak Hour Factor 90.3%
PM Peak Hour .... 16:15 to 17:15 (1932 vehicles)
PM Peak Hour Factor 96.2%

24-Hour Moving Total

01:00- 23395	02:00- 23394	03:00- 23397	04:00- 23401	05:00- 23396	06:00- 23423	07:00- 23428	08:00- 23463
09:00- 23519	10:00- 23558	11:00- 23527	12:00- 23533	13:00- 23474	14:00- 23444	15:00- 23532	16:00- 23452
17:00- 23488	18:00- 23519	19:00- 23590	20:00- 23583	21:00- 23572	22:00- 23740	23:00- 23841	24:00- 23853

Wednesday 08/13/97 Channel: [illegible] Direction: E

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Totals
205	91	57	55	71	145	383	572	765	835	1059	1346	1686	1870	1805	1863	1786	1859	1770	1558	1486	1338	802	436	23843
53	24	20	14	16	24	73	107	185	179	248	325	383	502	450	439	410	456	498	377	356	376	307	143	
55	35	15	14	7	24	99	137	198	203	219	327	413	478	444	442	453	506	472	437	377	350	202	99	
41	15	10	11	24	32	85	119	187	223	276	331	431	428	458	458	458	461	424	393	380	336	168	119	
56	16	12	16	24	65	125	209	195	230	316	363	459	462	453	524	465	436	376	351	373	276	125	75	

AM Peak Hour .... 11:00 to 12:00 (1346 vehicles)
AM Peak Hour Factor 92.7%
PM Peak Hour .... 17:15 to 18:15 (1901 vehicles)
PM Peak Hour Factor 93.9%

24-Hour Moving Total

01:00- 23856	02:00- 23852	03:00- 23848	04:00- 23861	05:00- 23858	06:00- 23823	07:00- 23846	08:00- 23805
09:00- 23808	10:00- 23743	11:00- 23694	12:00- 23697	13:00- 23657	14:00- 23612	15:00- 23511	16:00- 23613
17:00- 23494	18:00- 23454	19:00- 23438	20:00- 23554	21:00- 23643	22:00- 23730	23:00- 23793	24:00- 23843

Volume Report, 'STEVENS CREEK E/O BAYWOOD (EB)'

Thursday 08/14/97 Channel: 1 Direction: E

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Totals
215	106	63	58	72	171	351	573	789	915	1128	1342	1806	1953	1861	1884	1858	1906	1744	1541	1486	1391	795	419	24427
72	22	12	15	13	24	65	158	177	219	248	308	414	492	483	476	459	477	496	421	362	376	282	126	
45	25	11	11	14	29	88	140	201	223	264	325	426	468	470	449	441	509	452	400	383	365	211	99	
43	35	21	15	20	52	89	137	211	240	287	343	485	518	454	490	492	485	408	363	383	328	183	105	
55	24	19	17	25	66	109	138	200	233	329	366	481	475	454	469	466	435	388	357	358	322	119	89	

AM Peak Hour .... 11:00 to 12:00 (1342 vehicles)
AM Peak Hour Factor 91.7%
PM Peak Hour .... 12:45 to 13:45 (1959 vehicles)
PM Peak Hour Factor 94.5%

24-Hour Moving Total

01:00- 23853 02:00- 23868 03:00- 23874 04:00- 23877 05:00- 23876 06:00- 23904 07:00- 23872 08:00- 23873
09:00- 23897 10:00- 23977 11:00- 24046 12:00- 24042 13:00- 24162 14:00- 24245 15:00- 24301 16:00- 24322
17:00- 24394 18:00- 24441 19:00- 24415 20:00- 24398 21:00- 24398 22:00- 24451 23:00- 24444 24:00- 24427

Friday 08/15/97 Channel: 1 Direction: E

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Tota
226	93	60	60	76	168	341	610	817	947	1367	1708	2083	2233	2138	2061	2018	2165	1886	1716	1494	1463	1063	565	2735
80	24	16	18	11	18	52	105	192	193	313	407	486	554	536	530	538	559	522	518	363	359	379	166	
58	27	13	12	14	37	87	130	186	232	285	407	491	566	544	502	520	562	491	458	383	320	249	116	
30	24	17	17	23	44	92	155	215	249	370	424	543	546	540	523	478	551	442	407	356	409	261	121	
58	18	14	13	28	69	110	220	224	273	399	470	563	567	518	506	482	493	431	333	392	375	174	162	

AM Peak Hour .... 11:00 to 12:00 (1708 vehicles)
AM Peak Hour Factor 90.9%
PM Peak Hour .... 13:00 to 14:00 (2233 vehicles)
PM Peak Hour Factor 98.5%

24-Hour Moving Total

01:00- 24438 02:00- 24425 03:00- 24422 04:00- 24424 05:00- 24428 06:00- 24425 07:00- 24415 08:00- 24452
09:00- 24480 10:00- 24512 11:00- 24751 12:00- 25117 13:00- 25394 14:00- 25674 15:00- 25951 16:00- 26128
17:00- 26288 18:00- 26547 19:00- 26689 20:00- 26864 21:00- 26872 22:00- 26944 23:00- 27212 24:00- 27358

97-036

Volume Report, 'STEVENS CREEK E/O BAYWOOD (EB)'

Saturday 08/16/97 Channel: 1 Direction: E

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Totals
573	206	121	74	71	90	148	253	537	841	1250	1625	1890	2010	2028	654	0								12616
269	66	34	19	17	16	31	53	114	148	255	411	468	515	502	333	0								
104	60	35	23	18	15	32	73	111	209	304	395	464	510	532	321	0								
104	42	32	12	19	30	34	70	136	232	321	384	496	498	474	0									
96	38	20	20	17	29	51	57	176	252	370	435	462	487	520	0									

AM Peak Hour .... 11:00 to 12:00 (1625 vehicles)
AM Peak Hour Factor 93.4%
PM Peak Hour .... 14:15 to 15:15 (2058 vehicles)
PM Peak Hour Factor 96.7%

24-Hour Moving Total

01:00- 27705 02:00- 27818 03:00- 27879 04:00- 27893 05:00- 27886 06:00- 27810 07:00- 27617 08:00- 27305
09:00- 27025 10:00- 26919 11:00- 26802 12:00- 26719 13:00- 26526 14:00- 26303 15:00- 26193 16:00- 24986
17:00- N/A 18:00- N/A 19:00- N/A 20:00- N/A 21:00- N/A 22:00- N/A 23:00- N/A 24:00- N/A

97-036

Weekly Summary Report

Generated by MSC3000 Version 2.00 Copyright 1990, Mitron Systems Corporation

Location .... STEVENS CREEK E/O BAYWOOD (WB)
Location Code 2
County .... SAN JOSE
Recorder Set 08/08/97 12:35
Recording Start ... 08/08/97 13:00
Recording End 08/16/97 16:30
Sample Time .... 15 Minutes
Operator Number ... 1
Machine Number 45
Channel 1
Recorder Mode ..... Volume

Week of August 3, 1997. Channel: 1 Direction: W

End Time	3 Sun	4 Mon	5 Tue	6 Wed	7 Thu	8 Fri	9 Sat	Wkday Avg.	Daily Avg.
01:00							266		266
02:00							180		180
03:00							122		122
04:00							72		72
05:00							68		68
06:00							90		90
07:00							202		202
08:00							421		421
09:00							826		826
10:00							1319		1319
11:00							1699		1699
12:00							2018		2018
13:00							2049		2049
14:00						1923	2078	1923	2001
15:00						1907	2034	1907	1971
16:00						1820	1956	1820	1888
17:00						1733	1850	1733	1792
18:00						1731	1566	1731	1649
19:00						1537	1430	1537	1484
20:00						1540	1302	1540	1421
21:00						1322	1029	1322	1176
22:00						1126	891	1126	1009
23:00						703	580	703	642
24:00						401	352	401	377
Totals						15743	24400	15743	24738
% Avg Wkday						100.0	155.0		
% Avg Day						63.6	98.6		
AM Peak Hr							12:00		
AM Count							2018		
PM Peak Hr						14:00	14:00		
PM Count						1923	2078		

97-036

Weekly Summary Report

Location .... STEVENS CREEK E/O BAYWOOD (WB)
Location Code 2
County .... SAN JOSE
Recorder Set 08/08/97 12:35
Recording Start ... 08/08/97 13:00
Recording End 08/16/97 16:30
Sample Time .... 15 Minutes
Operator Number ... 1
Machine Number 45
Channel 1
Recorder Mode ..... Volume

Week of August 10, 1997. Channel: 1 Direction: W

End Time	10 Sun	11 Mon	12 Tue	13 Wed	14 Thu	15 Fri	16 Sat	Wkday Avg.	Daily Avg.
01:00	243	[illegible]	[illegible]	154	154	[illegible]	274	141	174
02:00	174	75	89	87	105	95	156	90	112
03:00	112	51	62	62	63	60	126	60	77
04:00	60	26	44	49	54	48	69	44	50
05:00	37	63	44	50	50	46	55	51	49
06:00	60	158	193	140	180	165	92	167	141
07:00	137	469	483	524	520	482	235	496	407
08:00	250	1148	1194	1208	1242	1138	415	1186	942
09:00	416	1220	1265	1389	1434	1375	823	1337	1132
10:00	701	1324	1208	1214	1248	1479	1279	1295	1208
11:00	1200	1490	1426	1436	1548	1702	1652	1520	1493
12:00	1691	1738	1784	1668	1766	2107	2020	1813	1825
13:00	1839	2016	1954	1947	1993	2250	2060	2032	2008
14:00	1913	1835	1811	1737	1810	1992	1987	1837	1869
15:00	1997	1735	1624	1617	1658	1850	2084	1697	1795
16:00	1989	1683	1563	1598	1644	1861	857	1670	1599
17:00	1783	1516	1539	1589	1552	1828		1605	1635
18:00	1444	1589	1644	1647	1665	1762		1661	1625
19:00	1138	1439	1553	1558	1487	1653		1538	1471
20:00	1007	1274	1335	1451	1446	1493		1400	1334
21:00	713	1029	1087	1098	1205	1314		1147	1074
22:00	647	680	783	784	805	1068		824	795
23:00	401	409	459	462	497	623		490	475
24:00	250	255	265	264	308	391		297	289
Totals	20202	23336	23540	23733	24434	26932	14184	24395	23580
% Avg Wkday	82.8	95.7	96.5	97.3	100.2	110.4	58.1		
% Avg Day	85.7	99.0	99.8	100.6	103.6	114.2	60.2		
AM Peak Hr	12:00	12:00	12:00	12:00	12:00	12:00	12:00		
AM Count	1691	1738	1784	1668	1766	2107	2020		
PM Peak Hr	15:00	13:00	13:00	13:00	13:00	13:00	15:00		
PM Count	1997	2016	1954	1947	1993	2250	2084		

97-036

Volume Count Report

Generated by [illegible]SC3000 Version 2.00 Copyright [illegible] Mitron Systems Corporation

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Location .......... STEVENS CREEK E/O BAYWOOD (WB)
Location Code ..... 2
County ............ SAN JOSE
Recorder Set ...... 08/08/97 12:35
Recording Start ... 08/08/97 13:00
Recording End ..... 08/16/97 16:30
Sample Time ....... 15 Minutes
Operator Number ... 1
Machine Number .... 45
Channel ........... 1
Divide By ......... 2
Summation ......... No
Two-Way ........... No
```

Friday 08/08/97 Channel: 1 Direction: W

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Totals
													1903	1907	1820	1733	1751	1537	1540	1322	1126	703	401	15743
													488	466	491	427	[illegible]	385	382	373	313	220	115	
													461	466	429	424	449	401	393	339	299	191	117	
													485	501	449	436	458	372	407	312	253	145	90	
													469	474	451	446	440	379	358	298	261	147	79	

```
AM Peak Hour .................... Unavailable
AM Peak Hour Factor ............. Unavailable
PM Peak Hour .................... 14:15 to 15:15 (1932 vehicles)
PM Peak Hour Factor ............. 96.4%
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Saturday 08/09/97 Channel: 1 Direction: W

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Totals
266	180	122	72	68	90	202	421	826	1319	1699	2018	2049	2078	2034	1956	1850	1566	1430	1302	1029	891	580	352	2440
65	62	45	24	28	11	35	76	166	290	422	491	535	522	491	514	482	400	373	313	277	228	174	100	
100	40	34	15	16	15	44	90	178	265	400	528	497	530	517	466	452	412	364	379	252	229	166	77	
62	42	22	14	13	27	52	105	198	336	424	476	515	512	500	486	488	410	363	308	260	218	126	95	
39	36	21	19	11	37	71	150	284	428	453	523	502	514	526	490	428	344	330	302	240	216	114	80	

```
AM Peak Hour .................... 11:00 to 12:00 (2018 vehicles)
AM Peak Hour Factor ............. 95.5%
PM Peak Hour .................... 13:00 to 14:00 (2078 vehicles)
PM Peak Hour Factor ............. 98.0%
```

24-Hour Moving Total

01:00- N/A	02:00- N/A	03:00- N/A	04:00- N/A	05:00- N/A	06:00- N/A	07:00- N/A	08:00- N/A
09:00- N/A	10:00- N/A	11:00- N/A	12:00- N/A	13:00- N/A	14:00- 25075	15:00- 25230	16:00- 25357
17:00- 25493	18:00- 25610	19:00- 25445	20:00- 25338	21:00- 25100	22:00- 24807	23:00- 24572	24:00- 24449

97-036

Sunday 08/10/97 Channel: 1 Direction: W

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Totals
243	174	112	60	37	60	137	250	416	701	1200	1691	1839	1913	1997	1989	1783	1444	1138	1007	713	647	401	250	20202
64	53	33	15	10	13	22	49	86	132	266	422	427	474	484	523	444	392	269	257	213	208	121	73	
67	36	29	16	11	16	25	53	76	173	256	403	474	476	514	494	457	365	314	277	183	142	120	75	
56	39	33	19	12	17	32	55	109	166	299	410	477	472	499	493	474	352	296	240	160	159	89	55	
56	46	17	10	4	14	58	93	145	230	379	456	461	491	500	479	408	335	259	233	157	138	71	47	

AM Peak Hour .... 11:00 to 12:00 (1691 venicles)
AM Peak Hour Factor 92.7%
PM Peak Hour .... 14:15 to 15:15 (2036 venicles)
PM Peak Hour Factor 97.3%

24-Hour Moving Total

01:00- 24377	02:00- 24371	03:00- 24361	04:00- 24349	05:00- 24318	06:00- 24288	07:00- 24223	08:00- 24052
09:00- 23642	10:00- 23024	11:00- 22525	12:00- 22198	13:00- 21998	14:00- 21823	15:00- 21786	16:00- 21819
17:00- 21752	18:00- 21630	19:00- 21338	20:00- 21043	21:00- 20727	22:00- 20483	23:00- 20304	24:00- 20202

Monday 08/11/97 Channel: 1 Direction: W

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Total
114	75	51	26	63	158	469	1148	1220	1324	1490	1738	2016	1835	1735	1683	1516	1589	1439	1274	1029	680	409	255	2333
36	24	13	6	12	20	90	207	281	332	397	425	552	477	433	429	354	355	374	335	277	213	139	65	
33	12	15	7	14	32	77	247	306	288	315	375	500	472	437	390	362	449	381	366	296	169	106	63	
22	19	12	4	15	35	115	300	307	324	361	438	472	432	419	418	412	394	377	301	227	155	96	70	
23	20	11	9	22	71	187	394	326	380	417	500	492	454	446	446	388	391	307	272	229	143	68	57	

AM Peak Hour .... 11:00 to 12:00 (1738 vehicles)
AM Peak Hour Factor 86.9%
PM Peak Hour .... 12:00 to 13:00 (2016 vehicles)
PM Peak Hour Factor 91.6%

24-Hour Moving Total

01:00- 20073	02:00- 19974	03:00- 19913	04:00- 19879	05:00- 19905	06:00- 20003	07:00- 20335	08:00- 21233
09:00- 22037	10:00- 22660	11:00- 22950	12:00- 22997	13:00- 23174	14:00- 23096	15:00- 22834	16:00- 22528
17:00- 22261	18:00- 22406	19:00- 22707	20:00- 22974	21:00- 23290	22:00- 23323	23:00- 23331	24:00- 23336

97-036

Tuesday 08/12/97 Channel: 1 Direction: W

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Totals
131	83	62	44	44	193	483	1134	1265	1208	1426	1784	1954	1811	1624	1563	1539	1644	1553	1335	1087	783	459	265	23540
37	23	21	10	4	28	76	219	290	305	370	407	526	431	394	387	372	334	415	361	307	221	145	81	
35	17	22	10	13	31	89	265	332	286	328	388	482	465	418	318	358	473	412	354	300	212	117	57	
31	22	9	12	8	61	123	319	295	289	357	460	480	477	417	412	387	450	355	319	247	176	109	61	
28	21	12	10	19	73	195	331	347	328	371	529	466	438	395	446	422	387	371	301	233	174	88	66	

AM Peak Hour .... 11:00 to 12:00 (1784 vehicles)
AM Peak Hour Factor 84.3%
PM Peak Hour .... 12:00 to 13:00 (1954 vehicles)
PM Peak Hour Factor 92.9%

24-Hour Moving Total

01:00- 23353	2:00- 23367	03:00- 23378	04:00- 23396	05:00- 23377	06:00- 23412	07:00- 23426	08:00- 23472
09:00- 23517	10:00- 23401	11:00- 23337	12:00- 23383	13:00- 23327	14:00- 23297	15:00- 23186	16:00- 23066
17:00- 23089	18:00- 23144	19:00- 23258	20:00- 23319	21:00- 23377	22:00- 23480	23:00- 23530	24:00- 23540

Wednesday 08/13/97 Channel: 1 Direction: W

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Total
154	87	62	49	50	140	524	1238	1389	1214	1436	1668	1947	1737	1617	1598	1589	1647	1558	1451	1098	784	462	254	2373
55	28	19	12	9	17	79	219	345	290	330	373	512	474	387	436	372	376	399	376	324	225	129	91	
39	22	15	15	8	27	105	295	370	297	322	400	507	412	405	355	376	456	397	383	279	193	137	59	
27	21	13	9	17	38	129	330	294	290	367	411	461	423	432	372	404	417	392	355	236	176	103	60	
33	16	15	13	16	58	211	394	380	337	417	484	467	428	393	435	437	398	370	337	259	190	93	54	

AM Peak Hour .... 11:00 to 12:00 (1668 vehicles)
AM Peak Hour Factor 86.2%
PM Peak Hour .... 12:00 to 13:00 (1947 vehicles)
PM Peak Hour Factor 95.1%

24-Hour Moving Total

01:00- 23563	02:00- 23561	03:00- 23561	04:00- 23566	05:00- 23572	06:00- 23519	07:00- 23560	08:00- 23574
09:00- 23698	10:00- 23704	11:00- 23714	12:00- 23598	13:00- 23591	14:00- 23517	15:00- 23510	16:00- 23545
17:00- 23595	18:00- 23598	19:00- 23603	20:00- 23719	21:00- 23730	22:00- 23731	23:00- 23734	24:00- 23733

Thursday 08/14/97 Channel: 1 Direction: W

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Totals
154	105	[illegible]	[illegible]	50	180	520	1242	1434	1248	1543	1766	1993	1810	1658	1644	1552	1665	1487	1446	1205	805	497	308	24434
53	33	[illegible]	14	9	23	80	243	379	307	417	390	546	475	431	441	355	363	375	332	324	226	131	89	
41	23	[illegible]	10	9	40	107	277	362	312	303	407	507	444	401	352	354	432	381	430	336	210	146	85	
32	22	[illegible]	11	19	57	103	309	363	285	361	446	485	422	431	383	408	453	368	339	289	177	133	79	
28	20	[illegible]	10	13	60	230	393	330	344	[illegible]	523	455	449	395	458	425	417	340	345	256	192	87	55	

AM Peak Hour .... 11:00 to 12:00 (1766 vehicles)
AM Peak Hour Factor 84.4%
PM Peak Hour .... 12:00 to 13:00 (1993 vehicles)
PM Peak Hour Factor 91.3%

24-Hour Moving Total

01:00- 23733	02:00- 23751	03:00- 23752	04:00- 23757	05:00- 23757	06:00- 23797	07:00- 23793	08:00- 23827
09:00- 23872	10:00- 23906	11:00- 24018	12:00- 24116	13:00- 24162	14:00- 24235	15:00- 24276	16:00- 24322
17:00- 24285	18:00- 24303	19:00- 24232	20:00- 24227	21:00- 24334	22:00- 24355	23:00- 24390	24:00- 24434

Friday 08/15/97 Channel: 1 Direction: W

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Totals
150	95	60	48	46	165	482	1138	1375	1479	1702	2107	2250	1992	1850	1861	1628	1762	1653	1493	1314	1068	623	391	26932
46	27	19	13	8	16	84	214	325	354	430	450	574	520	478	438	468	455	433	380	347	283	208	115	
41	20	16	19	10	38	97	266	359	353	401	501	559	492	475	449	436	464	403	402	350	273	141	96	
40	20	17	7	12	43	122	306	309	335	414	557	574	479	446	520	460	416	416	346	297	250	135	92	
23	28	8	9	16	68	179	352	382	427	457	599	543	501	451	454	464	426	401	365	320	262	139	88	

AM Peak Hour .... 11:00 to 12:00 (2107 vehicles)
AM Peak Hour Factor 87.9%
PM Peak Hour .... 12:00 to 13:00 (2250 vehicles)
PM Peak Hour Factor 98.0%

24-Hour Moving Total

01:00- 24430	02:00- 24420	03:00- 24417	04:00- 24411	05:00- 24407	06:00- 24392	07:00- 24354	08:00- 24250
09:00- 24191	10:00- 24422	11:00- 24576	12:00- 24917	13:00- 25174	14:00- 25356	15:00- 25548	16:00- 25765
17:00- 26041	18:00- 26138	19:00- 26304	20:00- 26351	21:00- 26460	22:00- 26723	23:00- 26849	24:00- 26932

Volume Report, 'STEVENS CREEK E/O BAYWOOD (WB)'

Saturday 08/16/97 Channel: 1 Direction: W

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Totals
274	156	109	69	55	92	235	415	823	1279	1652	2020	2060	1937	2084	857	0								14184
74	44	40	14	14	13	26	78	148	314	421	484	517	480	519	517	0								
91	33	18	20	11	17	49	73	182	288	395	503	540	456	548	340	0								
63	43	25	19	13	25	68	113	211	295	401	519	501	497	526	0									
46	36	26	16	17	37	92	151	282	382	435	514	502	504	491	0									

AM Peak Hour .... 11:00 to 12:00 (2020 vehicles)
AM Peak Hour Factor 97.3%
PM Peak Hour .... 13:45 to 14:45 (2097 vehicles)
PM Peak Hour Factor 95.7%

24-Hour Moving Total

01:00- 27056	02:00- 27117	03:00- 27183	04:00- 27204	05:00- 27213	06:00- 27140	07:00- 26893	08:00- 26170
09:00- 25518	10:00- 25418	11:00- 25368	12:00- 25281	13:00- 25091	14:00- 25086	15:00- 25320	16:00- 24316
17:00- N/A	18:00- N/A	19:00- N/A	20:00- N/A	21:00- N/A	22:00- N/A	23:00- N/A	24:00- N/A

97-036

Weekly Summary Report

Generated by MSC3000 Version [illegible] Copyright [illegible] Systems Corporation

Location .... WINCHESTER S/O OLSTEN (NB)
Location Code 3
County .... SAN JOSE
Recorder Set 07/27/97 10:06
Recording Start ... 07/27/97 11:00
Recording End 08/04/97 16:30
Sample Time .... 15 Minutes
Operator Number ...
Machine Number 16
Channel 1
Recorder Mode ..... Volume

Week of July 27, 1997. Channel: 1

End Time	27 Sun	28 Mon	29 Tue	30 Wed	31 Thu	1 Fri	2 Sat	Wkday Avg.	Daily Avg.
01:00		68	66	81	77	58	179	75	92
02:00		35	37	29	34	71	76	41	47
03:00		17	28	25	35	26	44	26	29
04:00		24	31	18	31	32	41	27	30
05:00		50	49	38	44	45	34	45	43
06:00		126	131	129	149	134	68	134	123
07:00		394	429	430	416	375	163	409	368
08:00		1240	1309	1246	1221	1151	304	1233	1079
09:00		1189	1159	1139	1187	1119	531	1159	1054
10:00		850	861	862	904	1077	969	911	921
11:00		972	988	1059	1030	1449	1368	1100	1144
12:00	1415	1235	1226	1299	1231	1663	1666	1331	1391
13:00	1377	1332	1281	1374	1347	1665	1633	1400	1430
14:00	1553	1325	1367	1311	1380	1582	1607	1393	1446
15:00	1338	1150	1188	1195	1259	1485	1642	1255	1322
16:00	1278	1149	1162	1204	1153	1385	1417	1211	1250
17:00	1256	1174	1109	1194	1211	1445	1450	1227	1263
18:00	921	1167	1115	1196	1168	1407	1144	1211	1160
19:00	933	1071	1099	1110	1214	1382	1187	1175	1142
20:00	818	1044	1105	1131	1248	1437	1221	1193	1143
21:00	581	738	750	743	804	1071	817	821	786
22:00	539	585	565	579	659	1028	846	683	686
23:00	305	305	370	341	397	535	461	390	388
24:00	141	141	142	146	182	256	249	173	180
Totals	12455	17381	17567	17879	18375	21908	19117	18622	18516

% Avg Wkday	66.9	93.3	94.3	96.0	98.7	117.6	102.7
% Avg Day	67.3	93.9	94.9	96.6	99.2	118.3	103.2
AM Peak Hr	12:00	08:00	08:00	12:00	12:00	12:00	12:00
AM Count	1415	1240	1309	1299	1231	1663	1666
PM Peak Hr	14:00	13:00	14:00	13:00	14:00	13:00	15:00
PM Count	1553	1332	1367	1374	1380	1665	1642

97-036

Weekly Summary Report

Location .... WINCHESTER S/O OLSTEN (NB)
Location Code 3
County .... SAN JOSE
Recorder Set 07/27/97 10:06
Recording Start ... 07/27/97 11:00
Recording End 08/04/97 16:30
Sample Time .... 15 Minutes
Operator Number ...
Machine Number 16
Channel 1
Recorder Mode ..... Volume

Week of August 3, 1997. Channel: 1

End Time	3 Sun	4 Mon	5 Tue	6 Wed	7 Thu	8 Fri	9 Sat	Wkday Avg.	Daily Avg.
01:00	119	87						87	103
02:00	63	41						41	52
03:00	51	21						21	36
04:00	30	11						11	21
05:00	32	41						41	37
06:00	60	154						154	107
07:00	96	376						376	236
08:00	162	1192						1192	677
09:00	310	1086						1086	698
10:00	496	841						841	669
11:00	962	1000						1000	981
12:00	1357	1225						1225	1291
13:00	1408	1309						1309	1359
14:00	1515	1306						1306	1411
15:00	1345	1159						1159	1252
16:00	1297	1170						1170	1234
17:00	1236								1236
18:00	928								928
19:00	920								920
20:00	839								839
21:00	534								534
22:00	482								482
23:00	323								323
24:00	134								134
Totals	14699	11019						11019	15557

	3 Sun	4 Mon
% Avg Wkday	133.4	100.0
% Avg Day	94.5	70.8
AM Peak Hr	12:00	12:00
AM Count	1357	1225
PM Peak Hr	14:00	13:00
PM Count	1515	1309

97-036

Volume Count Report

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Location .... WINCHESTER S/O OLSTEN (NB)
Location Code 3
County .... SAN JOSE
Recorder Set 07/27/97 10:06
Recording Start ... 07/27/97 11:00
Recording End 08/04/97 16:30
Sample Time .... 15 Minutes
Operator Number ...
Machine Number 16
Channel 1
Divide By 2
Summation .... No
Two-Way .... No

Sunday 07/27/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Total
											1415	1377	1353	1335	1278	1056	901	733	818	581	539	305	141	12455
											315	[illegible]	[illegible]	[illegible]	[illegible]	306	238	[illegible]	230	164	137	110	40	
											342	[illegible]	[illegible]	[illegible]	[illegible]	337	234	224	232	167	134	99	34	
											393	303	427	340	305	332	246	277	199	114	143	58	33	
											365	305	350	328	322	281	201	222	157	136	125	38	34	

AM Peak Hour .... 11:00 to 12:00 (1415 vehicles)
AM Peak Hour Factor 90.0%
PM Peak Hour .... 12:45 to 13:45 (1568 vehicles)
PM Peak Hour Factor 91.8%

Monday 07/28/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Total
68	35	17	24	50	126	394	1240	1189	850	972	1235	1332	1325	1150	1149	1174	1167	1071	1044	738	585	305	141	1738
22	13	7	6	6	18	64	205	321	200	241	245	335	314	302	289	273	289	256	263	221	178	125	43	
15	9	1	3	11	22	86	235	285	233	231	302	325	326	274	302	297	281	259	276	202	159	89	39	
19	6	5	5	13	39	113	379	285	194	237	343	324	338	300	273	310	281	276	292	151	132	49	29	
12	7	4	10	20	47	131	421	298	223	263	345	348	347	274	285	294	316	280	213	164	116	42	30	

AM Peak Hour .... 07:30 to 08:30 (1406 vehicles)
AM Peak Hour Factor 83.5%
PM Peak Hour .... 12:00 to 13:00 (1332 vehicles)
PM Peak Hour Factor 95.7%

24-Hour Moving Total

01:00– N/A	02:00– N/A	03:00– N/A	04:00– N/A	05:00– N/A	06:00– N/A	07:00– N/A	08:00– N/A
09:00– N/A	10:00– N/A	11:00– N/A	12:00– 17420	13:00– 17240	14:00– 17195	15:00– 16967	16:00– 16779
17:00– 16650	18:00– 16568	19:00– 16814	20:00– 16952	21:00– 17178	22:00– 17335	23:00– 17381	24:00– 17381

97-036

Tuesday 07/29/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Total
66	37	28	31	49	131	429	1309	1159	861	988	1226	1281	1367	1188	1162	1109	1115	1099	1105	750	565	370	142	17567
29	13	7	7	5	9	54	176	319	201	244	273	322	335	306	284	250	264	257	283	207	148	137	49	
15	4	5	6	9	21	71	280	307	225	241	289	343	340	306	312	267	310	268	314	198	154	95	39	
4	9	8	11	13	36	118	406	276	195	250	341	290	363	283	298	320	295	304	280	187	146	85	24	
18	11	8	7	22	65	186	447	257	240	253	323	326	329	293	268	272	246	270	228	158	117	53	30	

AM Peak Hour .... 07:30 to 08:30 (1479 vehicles)
AM Peak Hour Factor 82.7%
PM Peak Hour .... 13:00 to 14:00 (1367 vehicles)
PM Peak Hour Factor 94.1%

24-Hour Moving Total

01:00- 17379 02:00- 17381 03:00- 17392 04:00- 17399 05:00- 17398 06:00- 17403 07:00- 17438 08:00- 17507
09:00- 17477 10:00- 17488 11:00- 17504 12:00- 17495 13:00- 17444 14:00- 17456 15:00- 17524 16:00- 17537
17:00- 17472 18:00- 17420 19:00- 17448 20:00- 17509 21:00- 17521 22:00- 17501 23:00- 17566 24:00- 17567

Wednesday 07/30/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Total
81	29	25	18	38	129	430	1246	1139	862	1059	1299	1374	1311	1195	1204	1194	1196	1110	1131	743	579	341	146	17879
32	10	9	2	3	17	75	193	318	207	299	281	360	302	307	343	268	276	253	303	226	160	118	53	
17	8	7	2	9	20	71	235	291	226	256	317	352	342	305	280	284	335	262	320	192	150	101	48	
14	5	5	3	11	38	108	414	291	195	253	348	322	341	281	297	309	287	295	283	166	144	66	23	
18	6	4	11	15	54	176	404	239	233	251	353	340	326	302	284	333	298	300	225	159	125	56	22	

AM Peak Hour .... 07:30 to 08:30 (1427 vehicles)
AM Peak Hour Factor 86.2%
PM Peak Hour .... 12:00 to 13:00 (1374 vehicles)
PM Peak Hour Factor 94.9%

24-Hour Moving Total

01:00- 17582 02:00- 17574 03:00- 17571 04:00- 17558 05:00- 17547 06:00- 17545 07:00- 17546 08:00- 17483
09:00- 17463 10:00- 17464 11:00- 17535 12:00- 17608 13:00- 17701 14:00- 17645 15:00- 17652 16:00- 17694
17:00- 17779 18:00- 17860 19:00- 17871 20:00- 17897 21:00- 17890 22:00- 17904 23:00- 17875 24:00- 17879

Thursday 07/31/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Totals
71	34	35	31	44	149	416	1221	1187	904	1030	1231	1347	1380	1259	1153	1211	1168	1212	1248	804	659	397	182	18375
23	8	8	6	10	12	60	191	302	218	230	306	336	342	352	258	326	271	[illegible]	244	231	195	135	59	
20	12	8	7	10	30	75	261	320	223	254	258	394	335	306	333	239	309	[illegible]	320	207	155	124	37	
10	10	10	13	12	48	108	365	294	220	276	325	305	372	294	298	333	302	319	379	203	164	78	53	
18	4	9	5	12	59	173	404	271	243	270	342	312	331	307	264	313	286	284	305	163	145	60	33	

AM Peak Hour .... 07:30 to 08:30 (1391 vehicles)
AM Peak Hour Factor 86.1%
PM Peak Hour .... 13:00 to 14:00 (1380 vehicles)
PM Peak Hour Factor 92.7%

24-Hour Moving Total

01:00- 17869	02:00- 17874	03:00- 17884	04:00- 17897	05:00- 17903	06:00- 17923	07:00- 17909	08:00- 17884
09:00- 17932	10:00- 17974	11:00- 17945	12:00- 17877	13:00- 17850	14:00- 17919	15:00- 17983	16:00- 17932
17:00- 17949	18:00- 17921	19:00- 18025	20:00- 18142	21:00- 18203	22:00- 18283	23:00- 18339	24:00- 18375

Friday 08/01/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Totals
88	71	26	32	45	134	375	1151	1119	1077	1449	1663	1665	1582	1485	1385	1445	1407	1380	1437	1071	1028	535	256	21908
38	17	10	8	12	20	65	183	278	226	375	406	435	390	382	370	342	356	310	368	293	273	193	73	
20	20	2	7	9	27	80	250	288	238	342	408	432	389	361	339	354	362	346	398	290	260	159	70	
15	20	8	8	10	40	94	352	273	245	336	409	416	427	368	317	412	375	361	382	247	247	104	48	
15	14	6	9	14	47	136	355	280	368	396	440	382	376	374	359	337	314	363	289	241	248	79	65	

AM Peak Hour .... 11:00 to 12:00 (1663 vehicles)
AM Peak Hour Factor 94.5%
PM Peak Hour .... 12:00 to 13:00 (1665 vehicles)
PM Peak Hour Factor 95.7%

24-Hour Moving Total

01:00- 18392	02:00- 18429	03:00- 18420	04:00- 18421	05:00- 18422	06:00- 18407	07:00- 18366	08:00- 18296
09:00- 18228	10:00- 18401	11:00- 18820	12:00- 19252	13:00- 19570	14:00- 19772	15:00- 19998	16:00- 20230
17:00- 20464	18:00- 20703	19:00- 20871	20:00- 21060	21:00- 21327	22:00- 21696	23:00- 21834	24:00- 21908

97-036

Saturday 08/02/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Totals
179	[illegible]	44	41	34	68	163	334	531	969	1368	1666	1633	[illegible]	1442	1417	1450	1144	1187	1221	817	846	461	249	19117
68	[illegible]	15	7	9	11	28	[illegible]	99	227	333	394	442	[illegible]	334	332	376	301	283	346	213	192	194	60	
54	[illegible]	[illegible]	10	[illegible]	19	[illegible]	[illegible]	101	216	302	365	373	[illegible]	[illegible]	[illegible]	362	308	300	339	194	220	130	63	
23	[illegible]	14	[illegible]	11	16	39	72	133	253	343	458	420	416	397	328	368	276	327	283	208	248	71	64	
34	[illegible]	6	13	[illegible]	22	24	115	198	273	390	449	390	[illegible]	404	362	324	257	317	253	202	186	66	62	

AM Peak Hour .... 11:00 to 12:00 (1666 vehicles)
AM Peak Hour Factor 90.9%
PM Peak Hour .... 13:30 to 14:30 (1644 vehicles)
PM Peak Hour Factor 96.3%

24-Hour Moving Total

01:00- 21999 02:00- 22004 03:00- 22022 04:00- 22031 05:00- 22020 06:00- 21954 07:00- 21742 08:00- 20895
09:00- 20307 10:00- 20199 11:00- 20118 12:00- 20121 13:00- 20089 14:00- 20114 15:00- 20271 16:00- 20303
17:00- 20308 18:00- 20045 19:00- 19850 20:00- 19634 21:00- 19380 22:00- 19198 23:00- 19124 24:00- 19117

Sunday 08/03/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Totals
119	63	51	30	32	60	96	162	310	496	962	1357	1408	1515	1345	1297	1236	928	920	839	534	482	323	134	14699
41	19	17	7	12	8	14	24	67	102	175	298	333	363	346	356	318	256	210	227	135	110	120	41	
26	20	16	7	9	13	17	40	59	133	209	351	375	351	328	350	300	233	222	240	148	116	100	27	
29	8	10	8	6	22	20	45	79	114	264	365	375	408	344	318	330	246	248	211	129	119	65	38	
23	15	6	8	5	17	45	53	105	147	314	343	332	393	327	273	288	191	240	161	122	137	38	28	

AM Peak Hour .... 11:00 to 12:00 (1357 vehicles)
AM Peak Hour Factor 92.9%
PM Peak Hour .... 13:00 to 14:00 (1515 vehicles)
PM Peak Hour Factor 92.8%

24-Hour Moving Total

01:00- 19057 02:00- 19044 03:00- 19051 04:00- 19040 05:00- 19038 06:00- 19030 07:00- 18963 08:00- 18821
09:00- 18600 10:00- 18127 11:00- 17721 12:00- 17412 13:00- 17187 14:00- 17095 15:00- 16798 16:00- 16678
17:00- 16464 18:00- 16248 19:00- 15981 20:00- 15599 21:00- 15316 22:00- 14952 23:00- 14814 24:00- 14699

97-036

Volume Report, 'WINCHESTER S/O OLSTEN (NB)'

Monday 08/04/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Total
87	–	21	11	41	154	376	[illegible]	1086	841	1000	1225	1309	1306	1159	[illegible]	547								11566
31	[illegible]	6	1	7	18	57	[illegible]	295	238	226	272	339	346	293	339	284								
30	[illegible]	7	4	7	28	59	[illegible]	251	200	245	292	323	328	304	[illegible]	263								
14	[illegible]	5	2	12	40	114	[illegible]	264	192	268	290	312	314	277	[illegible]									
12		3	4	15	68	146	[illegible]	276	211	261	371	335	318	285	[illegible]									

AM Peak Hour .... 07:15 to 08:15 (1316 vehicles)
AM Peak Hour Factor 83.9%
PM Peak Hour .... 12:45 to 13:45 (1323 vehicles)
PM Peak Hour Factor 95.6%

24-Hour Moving Total

01:00- 14667 02:00- 14645 03:00- 14615 04:00- 14596 05:00- 14605 06:00- 14699 07:00- 14979 08:00- 16009
09:00- 16785 10:00- 17130 11:00- 17168 12:00- 17036 13:00- 16937 14:00- 16728 15:00- 16542 16:00- 16415
17:00- N/A 18:00- N/A 19:00- N/A 20:00- N/A 21:00- N/A 22:00- N/A 23:00- N/A 24:00- N/A

97-036

Weekly Summary Report

Generated by MSC3000 Version 2.00 Copyright [illegible] Mitron Systems Corporation

Location .... WINCHESTER S O OLSTEN (SB)
Location Code 4
County .... SAN JOSE
Recorder Set 07/27/97 10:06
Recording Start ... 07/27/97 11:00
Recording End 08/04/97 16:30
Sample Time .... 15 Minutes
Operator Number ...
Machine Number 16
Channel 2
Recorder Mode ..... Volume

Week of July 27, 1997. Channel: 2

End Time	27 Sun	28 Mon	29 Tue	30 Wed	31 Thu	1 Fri	2 Sat	Wkday Avg.	Daily Avg.
01:00		378	304	289	261	312	713	309	376
02:00		58	59	62	59	86	119	65	74
03:00		29	32	38	50	58	113	41	53
04:00		24	30	25	30	37	44	29	32
05:00		31	17	13	24	31	29	23	24
06:00		68	65	72	79	76	50	72	68
07:00		176	194	197	169	175	112	182	171
08:00		395	436	392	383	374	210	396	365
09:00		533	521	513	561	478	274	521	480
10:00		580	595	565	596	632	613	594	597
11:00		734	751	708	783	1085	943	812	834
12:00	916	1005	987	1019	1000	1394	1230	1081	1079
13:00	1087	1267	1265	1242	1269	1524	1466	1313	1303
14:00	1505	1285	1329	1395	1369	1706	1630	1417	1460
15:00	1559	1314	1336	1325	1307	1662	1738	1389	1463
16:00	1359	1239	1261	1298	1319	1466	1534	1317	1354
17:00	1547	1517	1442	1490	1582	1748	1689	1556	1574
18:00	1383	1693	1736	1758	1883	1980	1584	1810	1717
19:00	1148	1431	1447	1524	1618	1716	1373	1547	1465
20:00	1011	1069	1202	1234	1223	1387	1213	1223	1191
21:00	747	982	973	1007	1092	1248	971	1060	1003
22:00	895	1029	1097	1115	1128	1352	1306	1144	1132
23:00	472	530	581	598	594	879	682	636	619
24:00	239	233	241	289	303	541	451	321	328
Totals	13868	17600	17901	18168	18682	21947	20087	18860	18761
% Avg Wkday	73.5	93.3	94.9	96.3	99.1	116.4	106.5		
% Avg Day	73.9	93.8	95.4	96.8	99.6	117.0	107.1		
AM Peak Hr	12:00	12:00	12:00	12:00	12:00	12:00	12:00		
AM Count	916	1005	987	1019	1000	1394	1230		
PM Peak Hr	15:00	18:00	18:00	18:00	18:00	18:00	15:00		
PM Count	1559	1693	1736	1758	1883	1980	1738		

97-036

Weekly Summary Report

Location .... WINCHESTER S.O OLSTEN (NB)
Location Code 4
County .... SAN JOSE
Recorder Set 07/27/97 10:06
Recording Start ... 07/27/97 11:00
Recording End 08/04/97 16:30
Sample Time .... 15 Minutes
Operator Number ...
Machine Number 16
Channel 2
Recorder Mode ..... Volume

Week of August 3, 1997. Channel: 2

End Time	3 Sun	4 Mon	5 Tue	6 Wed	7 Thu	8 Fri	9 Sat	Wkday Avg.	Daily Avg.
01:00	641	290						290	466
02:00	128	56						56	92
03:00	76	34						34	55
04:00	42	24						24	33
05:00	29	30						30	30
06:00	33	66						66	50
07:00	62	160						160	111
08:00	105	363						363	234
09:00	229	520						520	375
10:00	390	617						617	504
11:00	588	751						751	670
12:00	839	1021						1021	930
13:00	1185	1214						1214	1200
14:00	1475	1351						1351	1413
15:00	1616	1262						1262	1439
16:00	1368	1250						1250	1309
17:00	1559								1559
18:00	1367								1367
19:00	1237								1237
20:00	1039								1039
21:00	743								743
22:00	858								858
23:00	479								479
24:00	292								292
Totals	16380	9009						9009	16482

% Avg Wkday	181.8	100.0
% Avg Day	99.4	54.7
AM Peak Hr	12:00	12:00
AM Count	839	1021
PM Peak Hr	15:00	14:00
PM Count	1616	1351

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```
Volume Count Report
Generated by MC3000 Version 2.00   Copyright 1990, 1991 Mitron Systems Corporation

Location .......... WINCHESTER S/O OLSTEN (JB)
Location Code ..... 4
County ............ SAN JOSE
Recorder Set ...... 07/27/97 10:06
Recording Start ... 07/27/97 11:00
Recording End ..... 08/04/97 16:30
Sample Time ....... 15 Minutes
Operator Number ...
Machine Number .... 16
Channel ........... 2
Divide By ......... 2
Summation ......... No
Two-Way ........... No

Sunday     07/27/97   Channel: 2
0100 0200 0300 0400 0500 0600 0700 0800 0900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300 2400 Total

                                                        916 1007 [illegible] 1559 [illegible] [illegible] 1333 1148 1011  747  895  472 [illegible] [illegible]

                                                        194  203 [illegible] [illegible] [illegible] [illegible]  333  308  317  178  346  257 [illegible]
                                                        208 [illegible] [illegible]  474 [illegible]  343  278  283  256  257  172   80 [illegible]
                                                        244  290  349  342  309  309  360  255  238  164  199   72   41
                                                        270  267 [illegible]  319 [illegible]  370  362  302  200  148  178   63   39

AM Peak Hour .................... 11:00 to 12:00 (916 vehicles)
AM Peak Hour Factor ............. 84.8%
PM Peak Hour .................... 13:15 to 14:15 (1578 vehicles)
PM Peak Hour Factor ............. 81.5%

Monday     07/28/97   Channel: 2
0100 0200 0300 0400 0500 0600 0700 0800 0900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300 2400 Total

 376   58   29   24   31   68  176  395  533  580  734 1005 1267 1285 1314 1239 1517 1693 1431 1069  982 1029  530  233  1760

 173   22    7    8    8    9   26   71  128  141  161  211  303  346  320  308  443  392  387  335  233  323  239   57
  45   14    6    5    6   23   45   87  129  114  176  264  308  313  380  301  326  369  343  248  303  220  114   52
 100   10    3    2   12   19   43  118  144  155  187  239  322  331  298  302  341  455  326  247  217  233  111   49
  60   12   13    9    5   17   60  119  132  170  210  291  334  295  316  328  407  477  375  239  229  253   66   75

AM Peak Hour .................... 11:00 to 12:00 (1005 vehicles)
AM Peak Hour Factor ............. 86.3%
PM Peak Hour .................... 17:00 to 18:00 (1693 vehicles)
PM Peak Hour Factor ............. 88.7%

24-Hour Moving Total
01:00-   N/A   02:00-   N/A   03:00-   N/A   04:00-   N/A   05:00-   N/A   06:00-   N/A   07:00-   N/A   08:00-   N/A
09:00-   N/A   10:00-   N/A   11:00-   N/A   12:00- 16874  13:00- 16963  14:00- 17143  15:00- 16923  16:00- 16678
17:00- 16558   18:00- 16528   19:00- 16838   20:00- 17121   21:00- 17179   22:00- 17414   23:00- 17548   24:00- 17606
```

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Tuesday 07/29/97 Channel: 2

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Totals
304	59	32	30	17	65	194	436	521	595	751	987	1265	1329	1336	1257	1442	1736	1447	1202	973	1097	581	241	17901
140	15	12	11	4	9	29	81	107	152	152	206	277	362	360	281	421	434	307	343	210	355	261	75	
31	14	5	5	3	15	46	107	137	143	188	236	336	360	322	330	316	369	415	321	300	241	142	44	
63	17	5	6	5	19	59	111	142	148	200	266	317	310	306	288	335	451	398	287	234	234	94	55	
70	13	10	8	5	22	60	137	135	152	211	279	335	297	348	358	370	482	327	251	229	267	84	67	

AM Peak Hour .... 11:00 to 12:00 (987 vehicles)
AM Peak Hour Factor 88.4%
PM Peak Hour .... 17:00 to 18:00 (1736 vehicles)
PM Peak Hour Factor 90.0%

24-Hour Moving Total

01:00- 17526 02:00- 17527 03:00- 17530 04:00- 17535 05:00- 17522 06:00- 17519 07:00- 17537 08:00- 17578
09:00- 17556 10:00- 17581 11:00- 17598 12:00- 17580 13:00- 17578 14:00- 17622 15:00- 17644 16:00- 17666
17:00- 17591 18:00- 17634 19:00- 17650 20:00- 17783 21:00- 17774 22:00- 17842 23:00- 17893 24:00- 17901

Wednesday 07/30/97 Channel: 2

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Totals
289	62	38	25	13	72	197	392	513	565	708	1019	1242	1395	1325	1294	1490	1758	1524	1234	1007	1115	598	289	18168
137	24	12	11	5	11	33	65	143	132	148	252	320	327	324	304	409	393	398	375	261	350	290	85	
37	12	12	4	3	15	47	98	111	152	189	224	305	384	326	311	337	386	376	306	264	282	115	55	
75	13	11	9	2	13	55	118	113	145	193	264	312	330	344	320	350	457	402	307	246	230	109	59	
40	13	3	1	3	33	62	111	146	136	178	279	305	354	331	359	394	522	348	246	236	253	84	90	

AM Peak Hour .... 11:00 to 12:00 (1019 vehicles)
AM Peak Hour Factor 91.3%
PM Peak Hour .... 17:15 to 18:15 (1763 vehicles)
PM Peak Hour Factor 84.4%

24-Hour Moving Total

01:00- 17886 02:00- 17889 03:00- 17895 04:00- 17890 05:00- 17886 06:00- 17893 07:00- 17896 08:00- 17852
09:00- 17844 10:00- 17814 11:00- 17771 12:00- 17803 13:00- 17780 14:00- 17846 15:00- 17835 16:00- 17872
17:00- 17920 18:00- 17942 19:00- 18019 20:00- 18051 21:00- 18085 22:00- 18103 23:00- 18120 24:00- 18168

Volume Report, 'WINCHESTER S/O OLSTEN (SB)'

Thursday 07/31/97 Channel: 2

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Total
261	58	50	30	24	79	169	383	561	596	783	1000	1269	1369	1307	1319	1582	1883	1618	1223	1092	1128	594	303	18682
123	[illegible]	15	4	2	9	29	100	112	133	169	249	301	346	305	320	434	440	457	315	286	329	264	87	
36	11	11	8	9	26	45	79	146	145	137	246	299	327	355	322	356	473	371	316	300	277	153	68	
59	[illegible]	9	12	5	19	40	85	139	141	250	250	326	348	332	313	365	486	371	333	253	284	95	65	
43	13	15	6	8	25	55	119	164	177	227	255	343	[illegible]	315	364	427	484	419	259	253	238	82	83	

AM Peak Hour .... 11:00 to 12:00 (1000 vehicles)
AM Peak Hour Factor 96.2%
PM Peak Hour .... 17:15 to 18:15 (1900 vehicles)
PM Peak Hour Factor 97.7%

24-Hour Moving Total

01:00- 18140 02:00- 18137 03:00- 18149 04:00- 18154 05:00- 18165 06:00- 18172 07:00- 18144 08:00- 18135
09:00- 18183 10:00- 18214 11:00- 18289 12:00- 18270 13:00- 18297 14:00- 18271 15:00- 18253 16:00- 18274
17:00- 18366 18:00- 18491 19:00- 18585 20:00- 18574 21:00- 18659 22:00- 18670 23:00- 18668 24:00- 18682

Friday 08/01/97 Channel: 2

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Total
312	85	58	37	31	76	175	374	478	632	1085	1394	1524	1706	1662	1466	1748	1980	1716	1387	1248	1352	879	541	21947
153	22	31	8	8	14	31	71	108	122	207	335	377	452	419	350	508	432	484	403	331	419	434	115	
42	30	6	11	12	19	33	76	110	163	285	354	362	422	429	375	375	467	433	350	360	313	179	83	
54	18	11	4	4	20	52	126	120	160	291	354	372	424	418	340	416	517	396	326	301	277	149	92	
63	15	10	14	7	23	59	101	140	187	302	351	413	408	396	401	449	564	403	308	256	343	117	251	

AM Peak Hour .... 11:00 to 12:00 (1394 vehicles)
AM Peak Hour Factor 98.4%
PM Peak Hour .... 17:15 to 18:15 (2032 vehicles)
PM Peak Hour Factor 90.1%

24-Hour Moving Total

01:00- 18733 02:00- 18760 03:00- 18768 04:00- 18775 05:00- 18782 06:00- 18779 07:00- 18785 08:00- 18776
09:00- 18693 10:00- 18729 11:00- 19031 12:00- 19425 13:00- 19680 14:00- 20017 15:00- 20372 16:00- 20519
17:00- 20685 18:00- 20782 19:00- 20880 20:00- 21044 21:00- 21200 22:00- 21424 23:00- 21709 24:00- 21947

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Saturday 08/02/97 Channel: 2

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Total
712	172	113	44	29	50	112	210	274	673	943	1230	1446	1630	1738	1624	1639	1634	1373	1213	971	1306	682	451	2008
309	41	36	12	10	14	13	41	57	175	213	249	388	430	437	472	524	414	347	345	210	398	292	101	
83	20	30	7	7	12	25	37	58	153	217	317	342	413	468	333	355	470	343	345	301	305	155	60	
105	21	16	13	9	12	36	56	74	155	228	313	357	418	414	367	306	331	337	271	251	310	131	73	
215	[illegible]	31	12	3	12	38	76	85	190	285	351	333	369	419	452	454	419	346	252	209	293	104	197	

AM Peak Hour .... 11:00 to 12:00 (1230 vehicles)
AM Peak Hour Factor 87.6%
PM Peak Hour .... 14:00 to 15:00 (1738 vehicles)
PM Peak Hour Factor 92.8%

24-Hour Moving Total

01:00- 22248 02:00- 22381 03:00- 22436 04:00- 22443 05:00- 22441 06:00- 22415 07:00- 22352 08:00- 22188
09:00- 21984 10:00- 21965 11:00- 21823 12:00- 21659 13:00- 21601 14:00- 21505 15:00- 21601 16:00- 21669
17:00- 21310 18:00- 21214 19:00- 20871 20:00- 20697 21:00- 20420 22:00- 20374 23:00- 20177 24:00- 20087

Sunday 08/03/97 Channel: 2

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Total
641	103	76	42	29	33	62	105	229	370	588	839	1188	1475	1616	1368	1559	1367	1237	1039	743	858	479	292	[illegible]
266	33	27	11	7	8	10	19	48	65	120	149	277	353	441	338	475	330	311	340	216	237	237	73	
64	33	15	8	5	13	13	20	50	89	139	200	295	440	425	335	302	271	282	255	231	178	94	51	
99	24	19	14	8	5	19	28	49	116	162	236	323	345	364	319	333	370	333	212	150	236	76	63	
212	13	15	9	9	7	20	38	82	100	167	254	316	337	386	376	449	396	311	232	146	207	72	105	

AM Peak Hour .... 11:00 to 12:00 (839 vehicles)
AM Peak Hour Factor 82.6%
PM Peak Hour .... 14:00 to 15:00 (1616 vehicles)
PM Peak Hour Factor 91.6%

24-Hour Moving Total

01:00- 20015 02:00- 20024 03:00- 19987 04:00- 19985 05:00- 19985 06:00- 19968 07:00- 19918 08:00- 19813
09:00- 19768 10:00- 19545 11:00- 19190 12:00- 18799 13:00- 18518 14:00- 18363 15:00- 18241 16:00- 18075
17:00- 17945 18:00- 17728 19:00- 17592 20:00- 17418 21:00- 17190 22:00- 16742 23:00- 16539 24:00- 16380

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Volume Report, 'WINCHESTER S/O OLSTEN (SB)'                                page 5

Monday      08/04/97    Channel: 2
0100 0200 0300 0400 0500 0600 0700 0800 0900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300 2400 Totals

 290    7   31   24   30   46  160  363  520  617  751 1021 1074 1351 1262 1250  756                                  9765

 145   12   10    5    5   12   24   74  118  123  153  209  264  275  301  324  418
  33   11    7    4   11   14   45   47  102  160  203  217  303  302  329  305  338
  48   10    8    9    3   22   37  105  142  156  194  203  330  344  277  301
  58   11    9    3   11   18   54  119  138  178  201  302  310  309  335  300

AM Peak Hour .................... 11:00 to 12:00 (1021 vehicles)
AM Peak Hour Factor ............. 84.5%
PM Peak Hour .................... 15:30 to 16:30 (1377 vehicles)
PM Peak Hour Factor ............. 82.4%

24-Hour Moving Total
01:00- 16029   02:00- 15957   03:00- 15915   04:00- 15897   05:00- 15898   06:00- 15931   07:00- 16029   08:00- 16287
09:00- 16578   10:00- 16805   11:00- 16968   12:00- 17150   13:00- 17179   14:00- 17055   15:00- 16701   16:00- 16583
17:00-   N/A   18:00-   N/A   19:00-   N/A   20:00-   N/A   21:00-   N/A   22:00-   N/A   23:00-   N/A   24:00-   N/A
```

97-036

FROM : TRAFFIC DATA SERVICE   PHONE   Sep. 15 1997 12:23PM

Volume Count Report

Generated by MSC3000 Version 2.00   Copyright 1990 [illegible]

Location .... EB STEVENS CREEK TO ON-RAMP TO SB I-880
Location Code 6
County .... SAN JOSE
Recorder Set 09/04/97 13:52
Recording Start ... 09/04/97 14:00
Recording End 09/12/97 14:30
Sample Time .... 15 Minutes
Operator Number ...
Machine Number 48
Channel 1
Divide By 2
Summation .... No
Two-Way .... No

AM PEAK = 483
PM PEAK = 1374
SAT PEAK = 1364

WEEKDAY ADT = 16,731

Thursday 09/04/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Total
														1138	[illegible]	1176	1324	1239	1161	1047	896	515	191	986
														275	[illegible]	294	346	340	278	274	214	234	58	
														274	[illegible]	288	353	294	312	266	242	119	60	
														291	[illegible]	298	320	295	281	266	230	103	38	
														297	[illegible]	295	305	310	290	241	210	59	35	

AM Peak Hour .... Unavailable
AM Peak Hour Factor .... Unavailable
PM Peak Hour .... 17:00 to 18:00 (1324 vehicles)
PM Peak Hour Factor 93.8%

Friday 09/05/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Total
105	45	30	28	19	58	159	350	470	423	730	953	1221	1350	1406	1312	1292	1211	1207	1168	1072	1099	703	320	1673
46	17	9	10	3	15	26	72	138	97	154	211	263	339	362	332	348	334	307	300	276	268	253	91	
23	14	10	8	4	7	39	77	129	103	158	244	290	318	353	328	338	301	288	272	278	284	172	102	
15	8	10	5	4	16	45	95	86	118	188	226	327	340	332	329	299	302	301	295	226	324	166	75	
21	6	1	5	8	20	49	106	117	105	230	272	341	353	359	323	307	274	311	301	292	223	112	52	

AM Peak Hour .... 11:00 to 12:00 (953 vehicles)
AM Peak Hour Factor 87.6%
PM Peak Hour .... 13:30 to 14:30 (1408 vehicles)
PM Peak Hour Factor 97.2%

24-Hour Moving Total

01:00- N/A
02:00- N/A
03:00- N/A
04:00- N/A
05:00- N/A
06:00- N/A
07:00- N/A
08:00- N/A
09:00- N/A
10:00- N/A
11:00- N/A
12:00- N/A
13:00- N/A
14:00- N/A
15:00- 15802
16:00- 16070
17:00- 16208
18:00- 16324
19:00- 16211
20:00- 16179
21:00- 16185
22:00- 16211
23:00- 16414
24:00- 16602

97-036

Volume Report, 'EB STEVENS CREEK TO ON-RAMP TO SB I-880'

Saturday 09/06/97 Channel: [illegible]

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700 ✓	1800	1900	2000	2100	2200	2300	2400	Total
273	[illegible]	47	23	29	33	82	[illegible]	284	370	[illegible]	911	1004	[illegible]	[illegible]	1304	1479	1388	[illegible]	922	839	923	433	230	[illegible]
68	17	13	5	7	5	12	17	70	72	170	219	242	290	308	331	356	388	369	259	204	253	133	65	
95	23	6	2	7	6	18	37	57	87	140	206	233	299	354	350	390	331	340	228	190	225	114	44	
73	10	[illegible]	8	7	12	27	32	60	87	198	233	266	314	300	343	379	345	334	228	210	278	106	67	
37	20	13	8	8	10	25	50	77	124	175	253	262	315	345	335	354	344	334	217	235	167	90	54	

AM Peak Hour .... 11:00 to 12:00 (911 vehicles)
AM Peak Hour Factor 90.0%
PM Peak Hour .... 16:15 to 17:15 (1491 vehicles)
PM Peak Hour Factor 95.5%

24-Hour Moving Total

01:00- 16899 02:00- 16930 03:00- 16947 04:00- 16942 05:00- 16952 06:00- 16930 07:00- 16853 08:00- 16629
09:00- [illegible] 10:00- 16390 11:00- 16375 12:00- 16373 13:00- 16076 14:00- 16154 15:00- 15905 16:00- 15957
17:00- 16144 18:00- 16321 19:00- 16381 20:00- 16145 21:00- 15910 22:00- [illegible] 23:00- 15466 24:00- 15376

Sunday 09/07/97 Channel: [illegible]

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Tota
269	75	56	36	23	22	54	98	188	294	377	604	872	1031	1255	1358	1385	1210	1082	852	447	417	222	109	1231
64	22	18	9	2	4	9	10	35	54	77	140	199	275	303	351	324	314	292	278	154	100	89	38	
82	19	11	6	7		10	28	46	66	89	135	195	248	312	317	356	325	266	208	97	134	47	32	
96	22	17	15	6	9	16	26	38	77	89	152	219	254	301	354	356	280	274	204	116	103	54	25	
27	12	10	6	8	9	19	32	69	97	122	176	259	304	339	336	349	292	250	162	80	80	32	14	

AM Peak Hour .... 11:00 to 12:00 (604 vehicles)
AM Peak Hour Factor 85.8%
PM Peak Hour .... 16:00 to 17:00 (1385 vehicles)
PM Peak Hour Factor 97.3%

24-Hour Moving Total

01:00- 15372 02:00- 15371 03:00- 15380 04:00- 15393 05:00- 15387 06:00- 15373 07:00- 15345 08:00- 15317
09:00- 15221 10:00- 15145 11:00- 14867 12:00- 14560 13:00- 14408 14:00- 14271 15:00- 14169 16:00- 14163
17:00- 14069 18:00- 13893 19:00- 13708 20:00- 13628 21:00- 13236 22:00- 12730 23:00- 12519 24:00- 12398

97-036

Volume Report, 'EB STEVENS CREEK TO ON-RAMP TO NB I-680'

Monday 09/08/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Totals
92	24	30	11	15	64	154	349	418	449	524	800	974	1132	1185	1164	1157	1283	1135	999	827	744	455	177	14193
24	5	10	6	1	9	26	66	114	105	[illegible]	181	244	265	306	292	335	348	304	256	249	219	198	59	
25	5	11	[illegible]	4	8	36	60	114	117	119	175	241	337	308	300	264	304	309	225	187	173	111	54	
29	[illegible]	3	[illegible]	3	19	47	105	100	103	144	210	218	297	323	284	334	318	271	251	193	175	82	34	
14	4	4	3	7	28	49	93	90	119	150	234	270	302	248	278	300	313	273	254	198	177	64	30	

AM Peak Hour .... 11:00 to 12:00 (800 vehicles)
AM Peak Hour Factor 83.3%
PM Peak Hour .... 17:00 to 18:00 (1283 vehicles)
PM Peak Hour Factor 92.2%

24-Hour Moving Total

01:00- 12221   02:00- 12170   03:00- 12144   04:00- [illegible]   05:00- [illegible]   06:00- 12153   07:00- 12253   08:00- 12504
09:00- 12734   10:00- 12889   11:00- 13045   12:00- [illegible]   13:00- 13344   14:00- 13385   15:00- 13315   16:00- [illegible]
17:00- 12853   18:00- 12364   19:00- 13038   20:00- [illegible]   21:00- 13565   22:00- 13890   23:00- 14125   24:00- 14193

Tuesday 09/09/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Tota
98	44	25	22	19	66	162	331	469	406	512	775	951	1103	1156	1100	1135	1243	1129	1057	978	908	435	189	143
29	9	5	6	1	14	27	54	116	106	109	181	216	267	271	277	312	335	318	274	272	253	182	62	
30	13	7	9	3	7	28	86	116	105	123	203	221	296	269	273	270	320	297	266	244	203	105	52	
22	10	6	4	8	23	48	87	119	100	134	209	231	268	306	280	275	296	255	254	242	291	97	36	
17	12	7	3	6	22	59	104	118	95	145	182	283	272	310	270	278	291	259	263	220	161	51	39	

AM Peak Hour .... 11:00 to 12:00 (775 vehicles)
AM Peak Hour Factor 92.7%
PM Peak Hour .... 17:00 to 18:00 (1243 vehicles)
PM Peak Hour Factor 92.5%

24-Hour Moving Total

01:00- 14199   02:00- 14219   03:00- 14214   04:00- 14225   05:00- 14228   06:00- 14230   07:00- 14238   08:00- 14220
09:00- 14271   10:00- 14228   11:00- 14206   12:00- 14181   13:00- 14158   14:00- 14129   15:00- 14100   16:00- 14046
17:00- 14014   18:00- 13974   19:00- 13947   20:00- 14005   21:00- 14155   22:00- 14320   23:00- 14300   24:00- 14312

97-036

Volume Report, 'EB STEVENS CREEK TO ON-RAMP TO EB I-880'

Wednesday 09/10/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Totals
92	30	17	22	23	64	[illegible]	343	475	335	[illegible]	[illegible]	[illegible]	[illegible]	1103	[illegible]	1127	1283	[illegible]	1130	971	1038	532	175	14769
28	[illegible]	6	5	5	14	20	[illegible]	131	[illegible]	116	178	218	233	[illegible]	[illegible]	276	334	310	309	288	266	223	47	
20	[illegible]	3	4	[illegible]	4	[illegible]	[illegible]	103	108	[illegible]	195	[illegible]	[illegible]	[illegible]	284	284	[illegible]	[illegible]	269	216	233	132	55	
20	[illegible]	[illegible]	6	7	25	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	282	[illegible]	295	[illegible]	[illegible]	261	240	253	101	49	
16	[illegible]	6	7	9	21	63	[illegible]	126	[illegible]	[illegible]	178	[illegible]	[illegible]	282	[illegible]	[illegible]	307	[illegible]	291	227	276	76	23	

AM Peak Hour .... 11:00 to 12:00 (747 vehicles)
AM Peak Hour Factor 94.3%
PM Peak Hour .... 17:00 to 18:00 (1283 vehicles)
PM Peak Hour Factor 96.0%

24-Hour Moving Total

01:00- 14305	02:00- 14298	03:00- 14290	04:00- [illegible]	05:00- [illegible]	06:00- [illegible]	07:00- 14297	08:00- 14314
09:00- 14321	10:00- 14310	11:00- 14324	12:00- [illegible]	13:00- [illegible]	14:00- 14358	15:00- 14305	16:00- 14396
17:00- 14388	18:00- 14428	19:00- 14490	20:00- [illegible]	21:00- 14556	22:00- 14666	23:00- 14783	24:00- 14769

Thursday 09/11/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Tota
103	51	22	19	25	54	172	379	483	423	583	817	1015	1181	1222	1252	1253	1374	1256	1218	1136	1035	551	187	1581
37	18	6	6	5	6	29	43	128	118	[illegible]	[illegible]	[illegible]	[illegible]	293	322	321	361	323	282	289	267	204	79	
31	12	5	6	3	10	40	68	134	95	146	206	209	257	309	332	307	322	311	310	276	276	145	46	
19	11	7	3	11	23	45	104	109	100	144	215	280	301	318	297	310	331	316	315	289	266	127	27	
16	10	4	4	5	15	60	104	112	110	172	202	[illegible]	319	302	313	315	360	306	311	282	226	75	35	

AM Peak Hour .... 11:00 to 12:00 (817 vehicles)
AM Peak Hour Factor 95.0%
PM Peak Hour .... 17:00 to 18:00 (1374 vehicles)
PM Peak Hour Factor 95.2%

24-Hour Moving Total

01:00- 14780	02:00- 14795	03:00- 14800	04:00- 14797	05:00- 14799	06:00- 14789	07:00- 14796	08:00- 14827
09:00- 14834	10:00- 14862	11:00- 14924	12:00- 14994	13:00- 15038	14:00- 15074	15:00- 15193	16:00- 15254
17:00- 15380	18:00- 15471	19:00- 15536	20:00- 15624	21:00- 15789	22:00- 15786	23:00- 15805	24:00- 15817

```
Volume Report, 'EB STEVENS CREEK TO ON-RAMP TO SB I-880'              page 5

Friday    09/12/97   Channel: 1
0100 0200 0300 0400 0500 0600 0700 0800 0900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300 2400 Total

  96   54   34   17   29   47  148  373  446  481  712 1049 1070  706  487                                                574

  30   17   14    6    4    8   21   61  141  122  147  239  314  135  242
  36   15   11    3    7   10   41   68  117  117  160  273  313  173  245
  26   12    6    4    5   12   39  113   99  124  197  285  259  186
   4   10    3    4   13   17   47  131   89  118  208  252  184  212

AM Peak Hour ...................... 11:00 to 12:00 (1049 vehicles)
AM Peak Hour Factor ............... 91.7%
PM Peak Hour ...................... 12:00 to 13:00 (1070 vehicles)
PM Peak Hour Factor ............... 85.2%

24-Hour Moving Total
01:00- 15810   02:00- 15813   03:00- 15825   04:00- 15823   05:00- 15827   06:00- 15820   07:00- 15795   08:00- 15789
09:00- 15752   10:00- 15810   11:00- 15934   12:00- 15756   13:00- 15827   14:00- 15746   15:00-   N/A   16:00-   N/A
17:00-   N/A   18:00-   N/A   19:00-   N/A   20:00-   N/A   21:00-   N/A   22:00-   N/A   23:00-   N/A   24:00-   N/A
```

97-036

FROM : TRAFFIC DATA SERVICE 1997 12:26PM P1

Post-it® Fax Note 7672

To STEPHEN HOVLIT
Co. BARTON ASCHMAN
Dept. SAN JOSE
Fax # (408) 280-7533
Phone # (408) 280-6600

From RICH HILL
Co. T.D.S.
Phone CAMPBELL
Phone # (408) 374-2970

Comments

STEPHEN - ATTACHED ARE THE COUNTS FOR THE VALLEY FAIR MALL AREA STUDY.

* SPECIAL NOTE: THEY WERE RE PAVING STEVENS CREEK WHEN THE COUNTS WERE PICKED UP

```
Volume Count Report
Generated by MSC3000 Version 2.00   Copyright 1990  1991 Mitron Systems Corporation

Location ........... I-880 NB OFF-RAMP TO WB STEVENS CREEK
Location Code ..... 5
County ............ SAN JOSE
Recorder Set ...... 09/04/97 13:38
Recording Start ... 09/04/97 14:00
Recording End ..... 09/12/97 14:45
Sample Time ....... 15 Minutes
Operator Number ...
Machine Number .... 16
Channel ........... 1
Divide By ......... 2
Summation ......... No
Two-Way ........... No
```

AM PEAK = 1004
PM PEAK = 1051
SAT PEAK = 1245

WEEKDAY ADT = 16,723

```
Thursday  09/04/97   Channel: 1
0100 0200 0300 0400 0500 0600 0700 0800 0900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300 2400 Totals

                                                                       964  945  994  916  969  851  572  337  190  101  6849

                                                                       258  225  245  214  224  233  158   90   67   28
                                                                       252  248  230  261  254  227  155   89   43   27
                                                                       213  237  251  211  238  236  144   73   35   17
                                                                       241  235  257  230  253  155  115   85   45   29

AM Peak Hour .................... Unavailable
AM Peak Hour Factor ............. Unavailable
PM Peak Hour .................... 16:00 to 17:00 (994 vehicles)
PM Peak Hour Factor ............. 93.1%

Friday    09/05/97   Channel: 1
0100 0200 0300 0400 0500 0600 0700 0800 0900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300 2400 Totals

  52   43   35   24   37  140  434  830 1003 1150 1263 1268 1272 1215 1062 1027 1034 1051  926  971  762  555  364  207  16723

  18    9    9    3    7   15   73  188  254  302  300  300  304  310  253  253  252  240  234  250  202  142  131   62
  11    9    6    7    8   20   80  194  276  270  302  296  332  297  257  261  261  275  228  247  211  139   97   51
  13   15   10    6    9   41  100  184  222  231  330  335  318  295  264  260  249  266  230  242  187  137   69   50
  10   10   10    8   13   64  181  264  238  347  331  237  319  312  288  253  262  270  234  232  162  137   67   44

AM Peak Hour .................... 09:45 to 10:45 (1279 vehicles)
AM Peak Hour Factor ............. 92.1%
PM Peak Hour .................... 12:15 to 13:15 (1279 vehicles)
PM Peak Hour Factor ............. 96.3%

24-Hour Moving Total
01:00- N/A    02:00- N/A    03:00- N/A    04:00- N/A    05:00- N/A    06:00- N/A    07:00- N/A    08:00- N/A
09:00- N/A    10:00- N/A    11:00- N/A    12:00- N/A    13:00- N/A    14:00- N/A    15:00- 15613  16:00- 15711
17:00- 15793  18:00- 15833  19:00- 15968  20:00- 15325  21:00- 16043  22:00- 16225  23:00- 16443  24:00- 16617
```

97 036

Volume Report, 'I-880 NB OFF-RAMP TO WB STEVENS CREEK'

Saturday 09/06/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Totals
142	88	101	29	14	52	168	382	676	892	1128	1257	1380	1243	1245	1185	1185	1021	886	801	532	454	290	169	15310
35	29	23	10	4	14	19	54	116	175	234	315	340	330	311	280	275	255	227	224	172	116	107	34	
49	18	22	6	4	7	25	69	144	195	282	316	344	332	315	315	282	283	222	216	133	116	84	50	
28	21	31	6	1	9	54	109	164	219	280	291	334	296	314	312	302	245	228	171	123	107	62	55	
30	20	25	7	5	22	70	150	252	303	332	335	362	285	305	278	286	237	207	190	104	115	37	30	

AM Peak Hour .... 11:00 to 12:00 (1257 vehicles)
AM Peak Hour Factor 93.8%
PM Peak Hour .... 12:00 to 13:00 (1380 vehicles)
PM Peak Hour Factor 95.3%

24-Hour Moving Total

01:00- 16813	02:00- 16848	03:00- 16914	04:00- 16919	05:00- 16896	06:00- 16905	07:00- 16542	08:00- 16094
09:00- 15770	10:00- 15512	11:00- 15377	12:00- 15366	13:00- 15473	14:00- 15501	15:00- 15684	16:00- 15842
17:00- 15993	18:00- 15963	19:00- 15923	20:00- 15753	21:00- 15523	22:00- 15422	23:00- 15348	24:00- 15310

Sunday 09/07/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Total
112	94	58	28	32	58	99	187	310	479	1000	1158	1318	1281	1273	1171	1082	832	632	478	315	268	158	77	1249
38	25	17	6	9	11	14	24	64	96	163	274	311	299	315	274	259	232	144	125	99	71	44	22	
31	13	18	13	3	12	15	30	47	119	233	260	313	328	323	337	288	232	183	143	81	74	45	18	
24	24	13	3	5	16	22	44	89	104	259	289	316	326	314	299	278	192	151	116	74	71	44	22	
19	32	10	6	15	19	38	89	110	158	345	335	378	328	321	262	258	175	154	94	61	52	25	15	

AM Peak Hour .... 10:45 to 11:45 (1168 vehicles)
AM Peak Hour Factor 84.6%
PM Peak Hour .... 12:45 to 13:45 (1331 vehicles)
PM Peak Hour Factor 88.0%

24-Hour Moving Total

01:00- 15280	02:00- 15286	03:00- 15243	04:00- 15242	05:00- 15260	06:00- 15266	07:00- 15197	08:00- 15002
09:00- 14636	10:00- 14223	11:00- 14095	12:00- 13996	13:00- 13934	14:00- 13972	15:00- 14000	16:00- 13986
17:00- 13883	18:00- 13694	19:00- 13440	20:00- 13117	21:00- 12900	22:00- 12714	23:00- 12582	24:00- 12490

Volume Report, 'I-880 NB OFF-RAMP TO WB STEVENS CREEK'

Monday 09/08/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Totals
34	22	19	13	30	134	396	692	930	947	956	1021	1083	996	890	922	882	903	823	702	446	328	162	92	13443
10	8	5	1	3	14	59	168	237	258	231	240	243	254	225	229	212	216	205	205	145	89	58	22	
7	3	4	4	10	14	61	158	219	228	205	229	271	258	214	221	212	242	213	165	116	76	51	33	
10	7	3	5	5	28	102	183	212	191	242	251	276	229	213	222	227	211	210	174	105	64	25	18	
7	4	7	3	12	78	174	183	262	270	278	301	293	255	238	250	231	234	195	158	80	99	28	19	

AM Peak Hour .... 11:00 to 12:00 (1021 vehicles)
AM Peak Hour Factor 84.8%
PM Peak Hour .... 12:15 to 13:15 (1094 vehicles)
PM Peak Hour Factor 93.3%

24-Hour Moving Total

01:00- 12412	02:00- 12350	03:00- 12311	04:00- 12296	05:00- 12294	06:00- 12270	07:00- 12667	08:00- 13172
09:00- 13792	10:00- 14260	11:00- 14216	12:00- 14079	13:00- 13844	14:00- 13559	15:00- 13176	16:00- 12927
17:00- 12727	18:00- 12818	19:00- 13009	20:00- 13233	21:00- 13364	22:00- 13424	23:00- 13428	24:00- 13443

Tuesday 09/09/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Totals
56	30	19	10	34	124	426	734	892	976	940	1027	1066	964	834	891	800	925	1021	741	502	310	215	117	13655
20	7	5	3	7	8	65	159	222	276	212	238	270	264	213	192	192	206	261	211	152	77	86	26	
10	5	5	0	8	22	81	143	213	221	203	252	276	246	212	221	186	257	256	197	155	94	52	42	
17	10	5	4	7	31	109	202	210	198	259	265	237	222	196	234	208	210	274	154	93	80	46	22	
9	8	4	3	12	63	171	230	247	281	266	272	283	232	213	244	214	253	230	179	102	59	31	27	

AM Peak Hour .... 11:00 to 12:00 (1027 vehicles)
AM Peak Hour Factor 94.4%
PM Peak Hour .... 12:00 to 13:00 (1066 vehicles)
PM Peak Hour Factor 94.2%

24-Hour Moving Total

01:00- 13465	02:00- 13473	03:00- 13473	04:00- 13470	05:00- 13474	06:00- 13464	07:00- 13494	08:00- 13536
09:00- 13498	10:00- 13527	11:00- 13511	12:00- 13517	13:00- 13500	14:00- 13468	15:00- 13412	16:00- 13381
17:00- 13299	18:00- 13302	19:00- 13500	20:00- 13539	21:00- 13595	22:00- 13577	23:00- 13630	24:00- 13655

97-036

Volume Report, 'I-880 NB OFF-RAMP TO WB STEVENS CREEK' page 4

Wednesday 09/10/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Totals
41	18	30	15	35	133	370	712	894	862	940	1113	1165	976	878	891	932	1003	1001	839	492	324	219	107	14069
12	3	12	1	5	15	54	183	224	205	221	247	306	232	225	226	210	235	237	233	166	80	81	33	
10	4	4	4	6	24	65	159	262	175	218	270	300	259	231	215	214	242	266	234	129	80	64	30	
9	5	6	3	7	29	72	173	186	227	235	279	277	233	213	223	238	236	257	194	110	89	41	24	
10	6	8	2	18	65	179	197	222	254	246	317	282	252	208	227	270	290	241	178	87	75	33	20	

AM Peak Hour .... 11:00 to 12:00 (1113 vehicles)
AM Peak Hour Factor 87.8%
PM Peak Hour .... 12:00 to 13:00 (1165 vehicles)
PM Peak Hour Factor 95.2%

24-Hour Moving Total

01:00- 13640 02:00- 13628 03:00- 13639 04:00- 13645 05:00- 13647 06:00- 13555 07:00- 13600 08:00- 13587
09:00- 13589 10:00- 13475 11:00- 13475 12:00- 13561 13:00- 13550 14:00- 13572 15:00- 13716 16:00- 13722
17:00- 13854 18:00- 13931 19:00- 13971 20:00- 14071 21:00- 14061 22:00- 14075 23:00- 14079 24:00- 14069

Thursday 09/11/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Totals
55	34	21	16	35	131	438	791	839	908	707	556	509	559	746	955	971	994	966	833	537	359	200	106	12277
22	8	7	3	7	11	56	171	261	252	236	116	138	127	128	216	244	235	251	225	173	111	69	26	
11	5	3	2	8	23	81	178	220	192	211	130	129	153	176	246	206	238	223	205	141	69	47	37	
10	11	3	5	7	30	110	185	206	204	132	157	109	131	208	259	260	248	233	200	114	91	40	28	
12	10	8	6	14	67	191	257	152	260	128	153	133	148	234	234	261	273	259	202	109	88	44	15	

AM Peak Hour .... 07:45 to 08:45 (944 vehicles)
AM Peak Hour Factor 90.4%
PM Peak Hour .... 17:15 to 18:15 (1010 vehicles)
PM Peak Hour Factor 92.5%

24-Hour Moving Total

01:00- 14083 02:00- 14099 03:00- 14090 04:00- 14090 05:00- 14090 06:00- 14088 07:00- 14156 08:00- 14226
09:00- 14171 10:00- 14217 11:00- 13984 12:00- 13427 13:00- 12771 14:00- 12364 15:00- 12232 16:00- 12290
17:00- 12329 18:00- 12320 19:00- 12225 20:00- 12217 21:00- 12262 22:00- 12297 23:00- 12278 24:00- 12277

97-036

Volume Report, 'I-680 NB OFF-RAMP TO WB STEVENS CREEK'

Friday 09/12/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Totals
72	35	20	12	33	138	430	775	1004	1043	1215	1248	1238	1184	782										9229
28	[illegible]	5	0	8	13	55	161	247	225	293	290	306	299	249										
16	3	3	2	11	25	81	183	243	234	269	310	293	285	277										
17	[illegible]	9	6	5	38	116	201	266	234	342	302	329	308	256										
11	[illegible]	3	4	9	62	178	230	248	350	311	346	310	292											

AM Peak Hour .... 09:45 to 10:45 (1254 vehicles)
AM Peak Hour Factor 89.6%
PM Peak Hour .... 12:00 to 13:00 (1238 vehicles)
PM Peak Hour Factor .... 94.[illegible]%

24-Hour Moving Total

01:00- 12294   02:00- 12295   03:00- 12294   04:00- 12290   05:00- 12287   06:00- 12294   07:00- 12286   08:00- 12270
09:00- 12435   10:00- 12570   11:00- 13078   12:00- 13770   13:00- 14499   14:00- 15114   15:00- N/A   16:00- N/A
17:00- N/A   18:00- N/A   19:00- N/A   20:00- N/A   21:00- N/A   22:00- N/A   23:00- N/A   24:00- N/A

97-036

Location .... I-880 SB OFF-RAMP TO WB STEVENS CREEK
Location Code 1
County .... SAN JOSE
Recorder Set ...... 10/01/97 [illegible]
Recording Start ... 10/01/97 [illegible]
Recording End ..... 10/06/97 [illegible]:30
Sample Time .... 15 Minutes
Operator Number ... 1
Machine Number 46
Channel 1
Divide By 2
Summation .... No
Two-Way .... No

AM PEAK = 493
PM PEAK = 628
SAT PEAK = 850

WEEKDAY ADT = 9,839

Wednesday 10/01/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Total
															635	572	608	640	566	311	215	147	87	[illegible]
															171	133	161	153	139	102	57	39	17	
															150	143	152	173	152	83	59	43	29	
															162	157	148	152	144	65	44	37	20	
															150	139	[illegible]	162	131	61	55	28	21	

AM Peak Hour .... Unavailable
AM Peak Hour Factor .... Unavailable
PM Peak Hour .... 17:30 to 18:30 (653 vehicles)
PM Peak Hour Factor 94.4%

Thursday 10/02/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Total
52	25	24	43	35	92	170	360	493	673	539	755	853	685	587	622	586	595	629	580	347	221	144	89	919
15	10	3	11	6	15	30	58	150	133	130	149	222	186	145	162	127	137	145	150	109	75	46	19	
13	5	6	9	10	16	28	66	138	203	147	154	249	159	164	159	160	146	151	155	97	42	36	31	
13	7	8	6	11	13	52	84	101	177	136	212	190	174	147	153	156	157	158	145	76	56	30	17	
11	3	7	17	8	48	60	152	104	160	126	240	192	166	131	148	143	155	175	130	65	48	32	22	

AM Peak Hour .... 11:00 to 12:00 (755 vehicles)
AM Peak Hour Factor 78.6%
PM Peak Hour .... 12:00 to 13:00 (853 vehicles)
PM Peak Hour Factor 85.6%

24-Hour Moving Total

01:00–	N/A	02:00–	N/A	03:00–	N/A	04:00–	N/A	05:00–	N/A	06:00–	N/A	07:00–	N/A	08:00–	N/A
09:00–	N/A	10:00–	N/A	11:00–	N/A	12:00–	N/A	13:00–	N/A	14:00–	N/A	15:00–	N/A	16:00–	9187
17:00–	9174	18:00–	9188	19:00–	9155	20:00–	9144	21:00–	9158	22:00–	9194	23:00–	9200	24:00–	9197

Friday 10/03/97 **Channel: 1**

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Tota
58	45	17	15	35	94	174	358	444	490	673	802	960	714	738	684	643	580	641	641	433	260	199	131	9
22	[illegible]	4	3	1	11	26	70	119	99	158	[illegible]	[illegible]	193	204	170	155	138	173	186	127	62	62	30	
20	12	9	0	7	27	42	103	109	116	165	190	251	165	172	162	155	149	144	167	123	78	59	30	
8	3	0	4	9	23	43	90	118	120	165	212	227	192	172	174	159	155	160	163	99	67	45	37	
8	15	2	3	11	33	63	103	98	155	185	203	279	164	190	178	173	138	164	125	84	53	33	34	

AM Peak Hour .... 11:00 to 12:00 (802 vehicles)
AM Peak Hour Factor 89.9%
PM Peak Hour .... 12:00 to 13:00 (960 vehicles)
PM Peak Hour Factor 91.3%

24-Hour Moving Total

01:00- 9205 02:00- 9225 03:00- 9218 04:00- 9190 05:00- 9190 06:00- 9192 07:00- 9196 08:00- 920
09:00- 9155 10:00- 8972 11:00- 9106 12:00- 9153 13:00- 9260 14:00- 9289 15:00- 9440 16:00- 950
17:00- 9559 18:00- 9544 19:00- 9556 20:00- 9617 21:00- 9703 22:00- 9742 23:00- 9797 24:00- 983

Saturday 10/04/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Tot
76	45	30	21	25	38	82	173	329	526	653	788	841	882	850	807	775	654	570	470	311	219	162	115	9
22	15	5	4	7	6	8	34	50	113	148	176	184	212	236	194	201	174	137	123	78	63	52	39	
25	14	11	8	6	9	23	51	79	114	134	183	213	210	191	211	205	163	133	138	89	61	43	21	
13	12	7	7	10	17	26	44	96	153	186	210	227	235	206	198	198	154	153	120	79	53	36	33	
16	4	6	2	2	5	25	44	104	146	185	219	220	225	217	204	171	163	147	89	65	42	31	22	

AM Peak Hour .... 11:00 to 12:00 (788 vehicles)
AM Peak Hour Factor 90.0%
PM Peak Hour .... 13:15 to 14:15 (906 vehicles)
PM Peak Hour Factor 96.0%

24-Hour Moving Total

01:00- 9857 02:00- 9861 03:00- 9874 04:00- 9880 05:00- 9870 06:00- 9814 07:00- 9722 08:00- 952
09:00- 9412 10:00- 9448 11:00- 9428 12:00- 9414 13:00- 9294 14:00- 9462 15:00- 9574 16:00- 969
17:00- 9829 18:00- 9903 19:00- 9832 20:00- 9661 21:00- 9539 22:00- 9498 23:00- 9461 24:00- 944

Sunday 10/05/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Total:
77	53	42	20	17	21	44	48	144	233	478	638	679	798	727	702	590	455	340	268	193	174	120	75	6993
23	11	14	7	1	6	7	11	22	43	87	157	168	208	177	142	151	117	86	45	58	50	33	23	
15	11	8	4	7	4	10	10	21	64	109	142	172	212	186	132	157	113	102	69	42	54	37	19	
21	10	12	5	5	6	15	17	38	55	137	164	179	204	189	190	138	129	69	62	46	42	26	19	
19	20	8	4	4	5	17	29	63	75	155	175	160	174	175	168	144	96	83	71	47	28	24	15	

AM Peak Hour .... 11:00 to 12:00 (638 vehicles)
AM Peak Hour Factor 91.1%
PM Peak Hour .... 13:00 to 14:00 (798 vehicles)
PM Peak Hour Factor 94.1%

24-Hour Moving Total

01:00-	9446	02:00-	9450	03:00-	9463	04:00-	9462	05:00-	9454	06:00-	9437	07:00-	9399	08:00-	9294
09:00-	9109	10:00-	8821	11:00-	8646	12:00-	8496	13:00-	8335	14:00-	8251	15:00-	8128	16:00-	8053
17:00-	7868	18:00-	7669	19:00-	7439	20:00-	7237	21:00-	7119	22:00-	7074	23:00-	7032	24:00-	6993

Monday 10/06/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Tota
43	30	18	15	23	71	152	467	453	413	213														190
5	10	6	9	5	8	29	63	118	93	98														
7	6	5	2	3	17	35	116	122	85	115														
15	11	2	2	9	18	35	143	110	113															
6	5	5	2	7	28	52	145	103	122															

AM Peak Hour .... 07:30 to 08:30 (528 vehicles)
AM Peak Hour Factor 91.0%
PM Peak Hour .... Unavailable
PM Peak Hour Factor .... Unavailable

24-Hour Moving Total

01:00-	6959	02:00-	6938	03:00-	6913	04:00-	6908	05:00-	6914	06:00-	6964	07:00-	7072	08:00-	7471
09:00-	7780	10:00-	7955	11:00-	N/A	12:00-	N/A	13:00-	N/A	14:00-	N/A	15:00-	N/A	16:00-	N/A
17:00-	N/A	18:00-	N/A	19:00-	N/A	20:00-	N/A	21:00-	N/A	22:00-	N/A	23:00-	N/A	24:00-	N/A

Location .... I-880 SB OFF-RAMP TO EB STEVENS CREEK
Location Code 2
County .... SAN JOSE
Recorder Set 10/01/97 14:36
Recording Start ... 10/01/97 [illegible]:00
Recording End ..... 10/06/97 [illegible]:45
Sample Time .... 15 Minutes
Operator Number ...
Machine Number 62
Channel 1
Divide By 2
Summation .... No
Two-Way .... No

AM PEAK = 136
PM PEAK = 168
SAT PEAK = 179

WEEKDAY ADT = 2,450

Wednesday 10/01/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Total
															175	184	177	151	128	87	62	79	40	108
															42	39	44	40	37	29	17	19	9	
															44	57	52	34	40	23	15	16	12	
															41	53	51	45	29	19	17	21	10	
															48	35	30	32	22	16	13	23	9	

AM Peak Hour .... Unavailable
AM Peak Hour Factor .... Unavailable
PM Peak Hour .... 16:15 to 17:15 (201 vehicles)
PM Peak Hour Factor 75.0%

Thursday 10/02/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Total
18	13	15	6	7	24	78	110	136	150	166	198	179	176	175	169	151	168	125	129	95	69	59	34	245
3	5	2	4	1	8	9	24	27	26	41	39	52	51	43	44	29	32	35	26	28	14	14	8	
5	1	5	2	2	6	21	26	34	54	41	45	38	41	33	45	50	62	32	40	22	15	17	7	
6	4	5	0	3	2	22	25	34	38	41	43	41	38	38	33	39	31	27	32	16	25	11	12	
4	3	3	0	1	8	26	35	41	32	43	71	48	46	61	47	33	43	31	31	29	15	17	7	

AM Peak Hour .... 11:00 to 12:00 (198 vehicles)
AM Peak Hour Factor 69.7%
PM Peak Hour .... 14:30 to 15:30 (188 vehicles)
PM Peak Hour Factor 77.0%

24-Hour Moving Total

01:00–	N/A	02:00–	N/A	03:00–	N/A	04:00–	N/A	05:00–	N/A	06:00–	N/A	07:00–	N/A	08:00–	N/A
09:00–	N/A	10:00–	N/A	11:00–	N/A	12:00–	N/A	13:00–	N/A	14:00–	N/A	15:00–	N/A	16:00–	2534
17:00–	2528	18:00–	2495	19:00–	2486	20:00–	2460	21:00–	2461	22:00–	2469	23:00–	2476	24:00–	2456

97-036

Friday 10/03/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Total
33	[illegible]	16	11	6	22	73	123	134	101	145	188	155	177	181	210	144	109	109	137	95	62	61	54	244
4	1	4	3	1		11	17	36	21	12	18	[illegible]	3	4	55	38	27	27	37	24	13	6	24	
3	4	4	5	2	1	17	30	23	25	34	49	44	37	55	43	49	40	40	28	32	20	15	12	
5	1	2	3	3	4	22	37	39	33	45	45	47	45	29	46	30	38	39	31	18	18	20	9	
6	1	2	0	2	4	23	39	35	35	30	55	41	47	55	55	27	34	33	41	21	11	20	9	

AM Peak Hour .... 11:00 to 12:00 (188 vehicles)
AM Peak Hour Factor 81.0%
PM Peak Hour .... 14:45 to 15:45 (210 vehicles)
PM Peak Hour Factor 80.8%

24-Hour Moving Total

01:00- 2455 02:00- 2451 03:00- 2452 04:00- 2457 05:00- 2456 06:00- 2454 07:00- 2449 08:00- 2462
09:00- 2460 10:00- 2431 11:00- 2410 12:00- 2400 13:00- 2410 14:00- 2411 15:00- 2417 16:00- 2458
17:00- 2451 18:00- 2422 19:00- 2426 20:00- 2434 21:00- 2434 22:00- 2427 23:00- 2429 24:00- 2449

Saturday 10/04/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Tota
36	15	7	9	6	14	28	55	77	97	121	114	1[illegible]	115	179	103	113	127	116	89	105	60	59	45	18
11	5	3	2	1	1	2	10	24	22	28	24	14	10	37	30	35	31	21	37	22	22	16	13	
15	7	3	5	2	1	7	16	18	19	27	22	31	38	45	35	24	48	41	17	33	18	15	12	
6	3	2	2	2	5	7	12	13	32	40	30	45	35	40	24	24	32	25	20	26	12	17	10	
4	1	0	0	1	5	12	18	22	27	39	28	30	33	57	30	30	26	29	15	24	8	11	11	

AM Peak Hour .... 10:00 to 11:00 (121 vehicles)
AM Peak Hour Factor 75.6%
PM Peak Hour .... 14:00 to 15:00 (179 vehicles)
PM Peak Hour Factor 78.5%

24-Hour Moving Total

01:00- 2462 02:00- 2468 03:00- 2459 04:00- 2457 05:00- 2457 06:00- 2449 07:00- 2404 08:00- 2337
09:00- 2280 10:00- 2256 11:00- 2232 12:00- 2148 13:00- 2109 14:00- 2068 15:00- 2066 16:00- 1979
17:00- 1948 18:00- 1946 19:00- 1933 20:00- 1885 21:00- 1895 22:00- 1893 23:00- 1891 24:00- 1883

97-036

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Sunday      10/05/97    Channel: 1
0100 0200 0300 0400 0500 0600 0700 0800 0900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300 2400 Total:

 [illegible] [illegible]  18  [illegible] [illegible]  4  25  [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] 108 [illegible] [illegible] [illegible]  55  90  45  51  57  27  [illegible]

                3                                          [illegible]                                       3  [illegible] [illegible] [illegible]  16  11   7
 [illegible]    5  [illegible] [illegible]  [illegible]            15  [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]  15  18  22  10  13  15   4
 [illegible]    6  [illegible] [illegible]   7  [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]  30  23  19  11  12  19   7
 [illegible]    1   2  [illegible]  10  [illegible]  28  [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]  20  25  18   9   8  12   9

AM Peak Hour .................... 10:45 to 11:45 ([illegible] vehicles)
AM Peak Hour Factor ............. 86.5%
PM Peak Hour .................... 12:30 to 13:30 ([illegible]24 vehicles)
PM Peak Hour Factor ............. 86.[illegible]%

24-Hour Moving Total
01:00- [illegible]83   02:00- 1886   03:00- [illegible]   04:00- 1894   05:00- 1895   06:00- 1885   07:00- 1883   08:00- 1850
09:00- [illegible]8    10:00- 1764   11:00- [illegible]   12:00- 1705   13:00- 1666   14:00- 1631   15:00- 1560   16:00- 1533
17:00- [illegible]     18:00- 1486   19:00- 1456   20:00- [illegible]   21:00- [illegible]   22:00- 1389   23:00- 1387   24:00- 1368

Monday      10/06/97    Channel: 1
0100 0200 0300 0400 0500 0600 0700 0800 0900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300 2400 Total

 [illegible]       [illegible]  5  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  [illegible]                                                                [illegible]

 [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]  [illegible]  [illegible]  [illegible]  [illegible]  28
  4  [illegible] [illegible]   3  [illegible]   3  20  [illegible]  [illegible]  33  29
  9  [illegible]   2   0   4   6  26  44  35  23  43
  3  [illegible]   2   1   0  10  24  35  37  34

AM Peak Hour .................... 08:30 to 09:30 (142 vehicles)
AM Peak Hour Factor ............. 95.9%
PM Peak Hour .................... Unavailable
PM Peak Hour Factor ............. Unavailable

24-Hour Moving Total
01:00- 1350   02:00- 1339   03:00- 1328   04:00- 1327   05:00- 1325   06:00- 1346   07:00- 1398   08:00- 1506
09:00- 1590   10:00- 1673   11:00- N/A    12:00- N/A    13:00- N/A    14:00- N/A    15:00- N/A    16:00- N/A
17:00- N/A    18:00- N/A    19:00- N/A    20:00- N/A    21:00- N/A    22:00- N/A    23:00- N/A    24:00- N/A
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97-036

Location .... I-880 NB OFF-RAMP TO EB STEVENS CREEK
Location Code 3
County .... SAN JOSE
Recorder Set 10/01/97 14:47
Recording Start ... 10/01/97 15:00
Recording End 10/06/97 10:30
Sample Time .... 15 Minutes
Operator Number ... 1
Machine Number 60
Channel 1
Divide By 2
Summation .... No
Two-Way .... No

AM PEAK = 272
PM PEAK = 272
SAT PEAK = 501

WEEKDAY ADT = 4,465

Wednesday 10/01/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Total
															289	271	223	230	196	113	85	83	63	155
															56	72	54	47	57	25	26	16	29	
															77	60	49	53	55	25	19	20	16	
															73	67	[illegible]	46	47	35	23	20	11	
															[illegible]	72	[illegible]	[illegible]	38	28	17	27	7	

AM Peak Hour .... Unavailable
AM Peak Hour Factor .... Unavailable
PM Peak Hour .... 15:15 to 16:15 (295 vehicles)
PM Peak Hour Factor 95.8%

Thursday 10/02/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Total
17	14	10	5	7	33	141	162	272	287	287	301	254	304	308	331	267	232	201	207	97	77	87	48	395
3	5	5	1	1	5	21	50	56	86	92	88	77	64	71	79	61	70	38	51	21	15	26	15	
3	6	2	1	2	4	39	31	60	77	57	70	67	76	62	82	65	57	60	59	27	19	21	15	
6	0	2	1	1	9	35	24	61	57	75	71	55	83	80	73	58	49	53	55	20	18	16	9	
5	3	1	2	3	15	46	57	95	67	63	72	54	81	95	97	83	56	50	42	29	25	24	9	

AM Peak Hour .... 08:30 to 09:30 (319 vehicles)
AM Peak Hour Factor 83.9%
PM Peak Hour .... 14:30 to 15:30 (336 vehicles)
PM Peak Hour Factor 88.4%

24-Hour Moving Total

01:00–	N/A	02:00–	N/A	03:00–	N/A	04:00–	N/A	05:00–	N/A	06:00–	N/A	07:00–	N/A	08:00–	N/A
09:00–	N/A	10:00–	N/A	11:00–	N/A	12:00–	N/A	13:00–	N/A	14:00–	N/A	15:00–	N/A	16:00–	3965
17:00–	4007	18:00–	4003	19:00–	4012	20:00–	3983	21:00–	3994	22:00–	3978	23:00–	3970	24:00–	3974

97-036

Friday 10/03/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Totals
25	[illegible]	[illegible]	2	12	47	155	180	240	335	333	369	479	361	337	324	372	250	[illegible]	134	109	89	103	79	4465
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	120		[illegible]	43	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	25	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	27	[illegible]	45	82	[illegible]	[illegible]	123	[illegible]	15	[illegible]	97	60	47	57	25	23	27	13	
6	[illegible]	[illegible]	[illegible]	4	[illegible]	48	[illegible]	51	74	[illegible]	99	118	[illegible]	[illegible]	53	61	51	39	47	35	19	26	20	
9	[illegible]	[illegible]	[illegible]	6	[illegible]	65	49	65	122	[illegible]	103	109	74	100	[illegible]	[illegible]	[illegible]	45	41	29	18	35	17	

AM Peak Hour .... 09:15 to 10:15 (372 vehicles)
AM Peak Hour Factor 76.2%
PM Peak Hour .... 12:00 to 13:00 (479 vehicles)
PM Peak Hour Factor 92.8%

24-Hour Moving Total

01:00- 3957 02:00- 3961 03:00- 3957 04:00- 3954 05:00- 3959 06:00- 3966 07:00- 3991 08:00- 3991
09:00- 3969 10:00- 4007 11:00- 4053 12:00- 4121 13:00- 4338 14:00- 4396 15:00- 4425 16:00- 4388
17:00- 4393 18:00- 4413 19:00- 4391 20:00- 4378 21:00- 4410 22:00- 4422 23:00- 4438 24:00- 4465

Saturday 10/04/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Totals
34	22	13	[illegible]	16	[illegible]	[illegible]	112	135	190	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	99	89	79	55	4521
10	4	3	5	5	[illegible]	[illegible]	[illegible]	[illegible]	45	53	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	34	15	14	20	
7	6	2	8	4	1	8	23	23	47	55	134	102	105	121	108	44	40	53	42	20	24	16	12	
11	5	6	2	[illegible]	4	19	35	31	49	[illegible]	119	159	108	134	121	52	37	50	25	15	30	22	13	
6	7	2	2	6	9	43	33	45	49	[illegible]	125	135	100	115	100	61	44	49	40	30	19	27	11	

AM Peak Hour .... 11:00 to 12:00 (482 vehicles)
AM Peak Hour Factor 89.9%
PM Peak Hour .... 12:30 to 13:30 (569 vehicles)
PM Peak Hour Factor 89.5%

24-Hour Moving Total

01:00- 4474 02:00- 4488 03:00- 4495 04:00- 4510 05:00- 4514 06:00- 4490 07:00- 4403 08:00- 4353
09:00- 4249 10:00- 4104 11:00- 4026 12:00- 4139 13:00- 4218 14:00- 4389 15:00- 4553 16:00- 4719
17:00- 4708 18:00- 4635 19:00- 4645 20:00- 4594 21:00- 4564 22:00- 4564 23:00- 4540 24:00- 4521

97-036

```
Sunday      10/05/97    Channel: 1
0100 0200 0300 0400 0500 0600 0700 0800 0900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300 2400 Tota

  32  [illegible]  13  14  [illegible]  [illegible]  58  63  80  104  [illegible]  [illegible]  333  448  517  223  189  148  155  148  89  70  61  40  33

  [illegible]  33  46  24  21  11  7
  5  [illegible]  5  4  3  [illegible]  6  [illegible]  28  [illegible]  37  [illegible]  60  [illegible]  103  13  18  28  40  41  33  15  15  10
  12  [illegible]  2  4  [illegible]  [illegible]  15  14  20  31  33  [illegible]  77  101  127  44  43  11  39  22  14  19  17  7
  6  [illegible]  0  0  [illegible]  [illegible]  35  13  28  29  [illegible]  124  [illegible]  125  131  [illegible]  41  [illegible]  49  39  18  15  14  5

AM Peak Hour ..................... 11:00 to 12:00 (314 vehicles)
AM Peak Hour Factor ............. 63.3%
PM Peak Hour ..................... 14:00 to 15:00 (517 vehicles)
PM Peak Hour Factor ............. 94.3%

24-Hour Moving Total
01:00- 4519   02:00- 4519   03:00- 4519   04:00- 4516   05:00- 4509   06:00- 4510   07:00- 4489   08:00- 4436
09:00- 4380   10:00- 4314   11:00- 4220   12:00- [illegible]   13:00- 3827   14:00- 3760   15:00- 3776   16:00- 3545
17:00- 3473   18:00- 3442   19:00- 3419   20:00- [illegible]   21:00- [illegible]   22:00- 3395   23:00- 3377   24:00- 3361

Monday      10/06/97    Channel: 1
0100 0200 0300 0400 0500 0600 0700 0800 0900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300 2400 Tota

  [illegible]  [illegible]  3  7  16  45  217  147  194  272  45                                                   [illegible]

  1  1  3  2  1  9  17  45  43  13  61
  2  1  1  3  4  12  30  33  33  70  24
  5  3  2  0  2  13  58  33  60  61
  2  3  3  0  3  15  112  34  54  55

AM Peak Hour ..................... 09:30 to 10:30 (301 vehicles)
AM Peak Hour Factor ............. 88.5%
PM Peak Hour ..................... Unavailable
PM Peak Hour Factor ............. Unavailable

24-Hour Moving Total
01:00- 3340   02:00- 3329   03:00- 3325   04:00- 3318   05:00- 3325   06:00- 3356   07:00- 3515   08:00- 3603
09:00- 3717   10:00- 3872   11:00- N/A    12:00- N/A    13:00- N/A    14:00- N/A    15:00- N/A    16:00- N/A
17:00- N/A    18:00- N/A    19:00- N/A    20:00- N/A    21:00- N/A    22:00- N/A    23:00- N/A    24:00- N/A
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97-036

Location .... WB STEVENS CREEK ON-RAMP TO NB I-680
Location Code 4
County .... SAN JOSE
Recorder Set ...... 10/01/97 [illegible]
Recording Start ... [illegible]
Recording End ..... 10/06/97 [illegible]
Sample Time .... 15 Minutes
Operator Number ... 1
Machine Number 49
Channel ....
Divide By 2
Summation .... No
Two-Way .... No

AM PEAK = 218
PM PEAK = 179
SAT PEAK = 234

~~WEEK~~DAY ADT = 2,960

Wednesday 10/01/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Total
															179	167	144	100	100	120	101	66	48	[illegible]
															40	41	41	[illegible]	27	26	22	21	16	
															34	41	34	13	24	33	41	15	11	
															50	42	22	22	29	21	26	16	15	
															53	41	[illegible]	13	20	40	12	14	5	

AM Peak Hour .... Unavailable
AM Peak Hour Factor .... Unavailable
PM Peak Hour .... 15:30 to 16:30 (188 vehicles)
PM Peak Hour Factor 88.7%

Thursday 10/02/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Total
26	[illegible]	5	8	8	36	98	178	172	159	132	181	231	219	210	229	154	149	144	132	102	91	57	54	27
13	4	2	1	0	1	16	35	48	43	36	41	56	66	43	50	44	34	38	35	24	25	14	14	
3	[illegible]	2	5	0	8	17	25	44	40	28	46	47	57	59	53	28	37	40	37	31	19	13	15	
6	[illegible]	1	1	4	13	31	70	45	39	26	38	69	51	61	76	45	37	35	27	22	20	11	14	
4	[illegible]	0	1	4	14	34	47	35	37	42	56	59	45	47	50	37	41	31	33	25	27	19	11	

AM Peak Hour .... 07:30 to 08:30 (209 vehicles)
AM Peak Hour Factor 74.6%
PM Peak Hour .... 12:30 to 13:30 (251 vehicles)
PM Peak Hour Factor 90.9%

24-Hour Moving Total

01:00–	N/A	02:00–	N/A	03:00–	N/A	04:00–	N/A	05:00–	N/A	06:00–	N/A	07:00–	N/A	08:00–	N/A
09:00–	N/A	10:00–	N/A	11:00–	N/A	12:00–	N/A	13:00–	N/A	14:00–	N/A	15:00–	N/A	16:00–	2717
17:00–	2757	18:00–	2754	19:00–	2759	20:00–	2783	21:00–	2815	22:00–	2797	23:00–	2787	24:00–	2778

97-036

Friday 10/03/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Totals
18	7	3	7	10	44	105	157	135	100	139	222	255	234	284	280	179	147	108	102	79	96	63	51	296
[illegible]		[illegible]	[illegible]	[illegible]	4	12	7	33	22	18	19	71	8	[illegible]	74	75	51	13	22	20	23	13	15	
[illegible]	[illegible]	0	2	6	5	17	30	42	22	25	53	64	30	72	74	23	34	42	31	20	22	17	15	
[illegible]	2	[illegible]	4	3	13	35	64	32	34	40	60	[illegible]	65	48	55	54	23	32	24	19	24	17	12	
[illegible]	0	0	1	3	20	30	46	32	40	49	64	57	61	70	57	47	37	25	25	20	27	11	8	

AM Peak Hour .... 11:00 to 12:00 (222 vehicles)
AM Peak Hour Factor 86.7%
PM Peak Hour .... 12:45 to 13:45 (300 vehicles)
PM Peak Hour Factor 88.2%

24-Hour Moving Total

01:00-	2776	02:00-	2774	03:00-	2772	04:00-	2771	05:00-	2775	06:00-	2783	07:00-	2790	08:00-	2779
09:00-	2743	10:00-	2704	11:00-	2731	12:00-	2772	13:00-	2806	14:00-	2831	15:00-	2955	16:00-	2986
17:00-	3011	18:00-	3009	19:00-	3003	20:00-	2973	21:00-	2950	22:00-	2957	23:00-	2963	24:00-	2960

Saturday 10/04/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Total
29	25	22	11	12	15	35	53	64	80	108	136	149	177	193	234	177	108	103	101	84	73	67	58	218
8	4	7	8	1	4	3	7	17	18	35	33	23	46	39	59	47	33	42	19	25	14	17	12	
11	7	11	2	4	1	9	12	14	17	22	25	47	55	43	53	35	48	28	35	19	18	15	16	
5	7	1	1	2	6	9	17	19	21	28	32	42	52	51	70	52	25	24	32	23	20	16	17	
5	7	3	0	5	4	14	17	14	24	21	46	37	51	60	52	42	31	28	14	17	21	19	13	

AM Peak Hour .... 11:00 to 12:00 (136 vehicles)
AM Peak Hour Factor 73.9%
PM Peak Hour .... 14:45 to 15:45 (242 vehicles)
PM Peak Hour Factor 86.4%

24-Hour Moving Total

01:00-	2973	02:00-	2991	03:00-	3010	04:00-	3014	05:00-	3014	06:00-	2985	07:00-	2915	08:00-	2801
09:00-	2729	10:00-	2689	11:00-	2638	12:00-	2552	13:00-	2446	14:00-	2359	15:00-	2258	16:00-	2232
17:00-	2230	18:00-	2211	19:00-	2195	20:00-	2194	21:00-	2199	22:00-	2174	23:00-	2178	24:00-	2185

Sunday 10/05/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Totals
37	21	23	7	4	11	22	40	38	73	63	97	134	157	212	143	145	174	96	60	76	43	43	35	1727
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	5	[illegible]	[illegible]	[illegible]	14	13	[illegible]	[illegible]	13	–	[illegible]	[illegible]	[illegible]	[illegible]	19	[illegible]	[illegible]	[illegible]	
12	[illegible]	4	3	0	2	3	9	[illegible]	20	20	25	31	[illegible]	42	12	41	23	30	20	20	12	14	2	
6	10	1	2	1	5	6	15	9	17	25	27	35	40	47	33	31	24	18	11	19	12	5	3	
7	4	0	1	2	3	6	6	14	19	23	22	39	43	44	22	28	19	24	11	18	8	13	10	

AM Peak Hour .... 10:45 to 11:45 (98 vehicles)
AM Peak Hour Factor 90.7%
PM Peak Hour .... 14:00 to 15:00 (212 vehicles)
PM Peak Hour Factor 85.5%

24-Hour Moving Total

01:00- 2191 02:00- 2197 03:00- 2198 04:00- 2194 05:00- 2186 06:00- 2182 07:00- 2169 08:00- 2156
09:00- 2130 10:00- 2123 11:00- 2098 12:00- 2059 13:00- 2034 14:00- 1994 15:00- 2023 16:00- 1934
17:00- 1903 18:00- 1879 19:00- 1953 20:00- 1912 21:00- 1904 22:00- 1774 23:00- 1750 24:00- 1727

Monday 10/06/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Total
16	11	8	4	8	48	120	218	144	102	48														74
9	1	2	0	0	7	14	62	34	21	39														
4	3	1	2	0	7	10	50	45	21	29														
2	3	5	2	5	15	37	62	42	27															
1	2	0	0	3	19	61	44	23	33															

AM Peak Hour .... 06:45 to 07:45 (235 vehicles)
AM Peak Hour Factor 94.8%
PM Peak Hour .... Unavailable
PM Peak Hour Factor .... Unavailable

24-Hour Moving Total

01:00- 1705 02:00- 1685 03:00- 1670 04:00- 1667 05:00- 1671 06:00- 1708 07:00- 1808 08:00- 1986
09:00- 2092 10:00- 2121 11:00- N/A 12:00- N/A 13:00- N/A 14:00- N/A 15:00- N/A 16:00- N/A
17:00- N/A 18:00- N/A 19:00- N/A 20:00- N/A 21:00- N/A 22:00- N/A 23:00- N/A 24:00- N/A

97-036

Location .... WB STEVENS CREEK ON-RAMP TO SB I-880
Location Code 5
County .... SAN JOSE
Recorder Set 10/01/97 11:16
Recording Start ... 10/01/97 15:00
Recording End 10/06/97 10:30
Sample Time .... 15 Minutes
Operator Number ... 1
Machine Number 12
Channel 2
Divide By 2
Summation .... No
Two-Way .... No

AM PEAK = 160
PM PEAK = 354
SAT PEAK = 270

WEEKDAY ADT = 3,433

Wednesday 10/01/97 Channel: 2

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Total
															364	317	277	228	192	148	115	89	54	168
															93	88	95	75	53	23	27	30	19	
															91	61	63	51	49	35	36	17	9	
															93	[illegible]	66	54	45	47	28	20	13	
															[illegible]	97	53	41	45	43	24	22	13	

AM Peak Hour .... Unavailable
AM Peak Hour Factor .... Unavailable
PM Peak Hour .... 16:30 to 17:30 (326 vehicles)
PM Peak Hour Factor 84.0%

Thursday 10/02/97 Channel: 2

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Tota
31	7	9	7	5	15	53	152	159	127	167	202	212	251	243	326	293	354	201	193	146	117	77	49	339
14	3	2	3	2	1	12	19	44	34	30	55	62	57	54	77	71	94	58	51	32	33	19	15	
4	3	5	1	1	1	6	27	39	29	44	52	47	61	66	87	70	104	45	53	33	24	18	8	
8	0	1	3	0	7	17	40	35	27	46	45	39	70	64	87	72	84	52	48	40	32	14	13	
5	1	1	0	2	6	18	66	40	37	47	50	64	63	59	75	80	72	46	41	41	28	26	13	

AM Peak Hour .... 11:00 to 12:00 (202 vehicles)
AM Peak Hour Factor 91.8%
PM Peak Hour .... 16:45 to 17:45 (362 vehicles)
PM Peak Hour Factor 87.0%

24-Hour Moving Total

01:00–	N/A	02:00–	N/A	03:00–	N/A	04:00–	N/A	05:00–	N/A	06:00–	N/A	07:00–	N/A	08:00–	N/A
09:00–	N/A	10:00–	N/A	11:00–	N/A	12:00–	N/A	13:00–	N/A	14:00–	N/A	15:00–	N/A	16:00–	3324
17:00–	3386	18:00–	3362	19:00–	3439	20:00–	3412	21:00–	3413	22:00–	3411	23:00–	3413	24:00–	3401

97-036

Friday 10/03/97 Channel: 2

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Total
25	12	9	8	4	16	57	144	151	164	190	240	214	276	268	329	272	271	189	180	134	122	104	58	343
3	[illegible]	4	1	[illegible]	1	[illegible]	12	43	34	18	59	41	70	48	42	70	70	57	44	32	30	19	19	
5	2	1	0	2	2	11	35	37	31	46	53	50	65	75	84	75	65	45	45	33	33	31	11	
9	5	3	3	2	3	13	39	29	47	49	64	61	77	65	73	76	65	32	37	38	38	26	17	
3	4	1	3	0	7	26	49	37	52	50	67	58	67	59	90	50	66	55	54	31	21	28	11	

AM Peak Hour .... 11:00 to 12:00 (240 vehicles)
AM Peak Hour Factor 89.6%
PM Peak Hour .... 15:00 to 16:00 (329 vehicles)
PM Peak Hour Factor 91.4%

24-Hour Moving Total

01:00- 3390	02:00- 3401	03:00- 3401	04:00- 3402	05:00- 3401	06:00- 3402	07:00- 3406	08:00- 3398
09:00- 3390	10:00- 3427	11:00- 3440	12:00- 3478	13:00- 3480	14:00- 3505	15:00- 3530	16:00- 3533
17:00- 3512	18:00- 3429	19:00- 3417	20:00- 3404	21:00- 3392	22:00- 3397	23:00- 3424	24:00- 3433

Saturday 10/04/97 Channel: 2

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Tota
41	23	18	9	9	15	19	66	98	103	139	141	171	203	168	270	217	195	185	152	75	82	78	74	25
16	11	5	4	1	3	2	12	29	30	32	33	40	61	54	59	66	54	62	31	16	29	20	28	
5	3	5	2	0	3	8	10	21	22	31	37	45	50	49	63	44	49	42	30	11	25	17	14	
10	7	6	2	5	3	4	20	30	31	36	38	34	61	41	77	55	45	38	53	26	17	20	17	
10	5	2	1	2	7	5	23	18	38	40	33	49	51	44	71	52	50	43	38	22	11	21	15	

AM Peak Hour .... 10:45 to 11:45 (148 vehicles)
AM Peak Hour Factor 92.5%
PM Peak Hour .... 15:15 to 16:15 (277 vehicles)
PM Peak Hour Factor 89.9%

24-Hour Moving Total

01:00- 3449	02:00- 3459	03:00- 3468	04:00- 3469	05:00- 3473	06:00- 3472	07:00- 3434	08:00- 3356
09:00- 3303	10:00- 3262	11:00- 3221	12:00- 3122	13:00- 3078	14:00- 3025	15:00- 2945	16:00- 2886
17:00- 2831	18:00- 2758	19:00- 2754	20:00- 2726	21:00- 2667	22:00- 2627	23:00- 2601	24:00- 2617

97-036

Sunday 10/05/97 Channel: 2

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Tota
44	27	11	11	3	8	14	55	57	75	87	146	129	157	171	208	178	169	148	112	107	66	40	44	20
18	6	3	3	2	2	4	14	14	16	33	32	22	38	47	39	48	43	32	30	38	27	14	13	
8	5	6	4	0	1	1	9	15	19	24	48	34	40	44	53	42	51	42	24	27	20	6	7	
9	7	1	0	0	2	3	15	13	21	13	32	39	48	45	58	45	45	45	31	19	12	9	18	
9	9	1	4	1	3	6	17	15	19	17	34	34	31	35	58	43	30	29	27	23	7	11	6	

AM Peak Hour .... 11:00 to 12:00 (146 vehicles)
AM Peak Hour Factor 76.0%
PM Peak Hour .... 15:15 to 16:15 (217 vehicles)
PM Peak Hour Factor 93.5%

24-Hour Moving Total

01:00- 2620 02:00- 2619 03:00- 2612 04:00- 2614 05:00- 2609 06:00- 2602 07:00- 2597 08:00- 258
09:00- 2545 10:00- 2497 11:00- 2445 12:00- 2450 13:00- 2409 14:00- 2343 15:00- 2326 16:00- 226
17:00- 2225 18:00- 2196 19:00- 2159 20:00- 2119 21:00- 2157 22:00- 2135 23:00- 2097 24:00- 206

Monday 10/06/97 Channel: 2

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Tot
15	12	10	6	4	24	58	116	160	161	91														
3	5	2	2	1	3	7	24	49	55	33														
2	1	2	2	0	4	11	20	40	35	58														
5	4	2	1	1	7	15	33	38	43															
5	2	4	1	2	10	25	39	33	28															

AM Peak Hour .... 07:45 to 08:45 (166 vehicles)
AM Peak Hour Factor 84.7%
PM Peak Hour .... Unavailable
PM Peak Hour Factor .... Unavailable

24-Hour Moving Total

01:00- 2038 02:00- 2023 03:00- 2022 04:00- 2017 05:00- 2018 06:00- 2034 07:00- 2078 08:00- 213
09:00- 2242 10:00- 2328 11:00- N/A 12:00- N/A 13:00- N/A 14:00- N/A 15:00- N/A 16:00- N/
17:00- N/A 18:00- N/A 19:00- N/A 20:00- N/A 21:00- N/A 22:00- N/A 23:00- N/A 24:00- N/

Location .... EB STEVENS CREEK ON-RAMP TO NB I-880
Location Code 6
County .... SAN JOSE
Recorder Set 10/01/97 14:04
Recording Start ... 10/01/97 15:00
Recording End 10/06/97 10:45
Sample Time .... 15 Minutes
Operator Number ... 1
Machine Number 37
Channel 1
Divide By 2
Summation .... No
Two-Way .... No

AM PEAK = 252
PM PEAK = 504
SAT PEAK = 750

WEEKDAY ADT = 8,250

Wednesday 10/01/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Tota
															492	473	468	460	428	405	364	202	92	33
															128	108	105	127	112	123	101	80	26	
															128	125	115	115	100	94	94	62	26	
															136	117	141	115	102	99	105	23	18	
															100	123	107	103	114	89	64	37	22	

AM Peak Hour .... Unavailable
AM Peak Hour Factor .... Unavailable
PM Peak Hour .... 15:00 to 16:00 (492 vehicles)
PM Peak Hour Factor 90.4%

Thursday 10/02/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Tota
47	23	25	23	52	112	198	181	190	281	353	434	618	757	595	532	458	456	452	395	448	369	205	102	73
14	7	9	9	6	12	50	51	27	64	80	102	117	210	169	139	111	121	116	104	112	95	74	40	
13	4	3	3	10	23	47	57	39	66	78	121	137	177	147	158	103	115	106	113	106	91	59	27	
10	5	6	6	18	24	63	44	65	68	97	116	176	171	131	130	133	127	122	93	119	105	47	15	
10	6	7	5	18	53	38	29	59	83	98	95	188	199	148	105	111	93	108	85	111	78	25	20	

AM Peak Hour .... 10:45 to 11:45 (437 vehicles)
AM Peak Hour Factor 90.3%
PM Peak Hour .... 13:00 to 14:00 (757 vehicles)
PM Peak Hour Factor 90.1%

24-Hour Moving Total

01:00–	N/A	02:00–	N/A	03:00–	N/A	04:00–	N/A	05:00–	N/A	06:00–	N/A	07:00–	N/A	08:00–	N/A
09:00–	N/A	10:00–	N/A	11:00–	N/A	12:00–	N/A	13:00–	N/A	14:00–	N/A	15:00–	N/A	16:00–	7273
17:00–	7313	18:00–	7298	19:00–	7286	20:00–	7278	21:00–	7245	22:00–	7288	23:00–	7293	24:00–	7296

97-036

Friday 10/03/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Totals
53	29	21	27	54	106	203	[illegible]	252	289	438	558	712	779	641	545	482	504	494	504	428	461	285	159	8250
19	[illegible]	[illegible]	3	7	[illegible]	41	[illegible]	45	53	36	134	145	[illegible]	173	124	113	125	138	137	122	109	99	44	
15	5	[illegible]	2	8	23	55	[illegible]	57	75	118	157	177	200	157	132	118	133	125	135	111	108	69	45	
12	12	7	6	14	22	60	51	69	89	109	126	172	194	150	139	136	129	112	119	91	149	56	42	
17	5	5	5	25	50	42	44	81	66	125	141	223	173	161	140	115	116	119	113	104	95	62	28	

AM Peak Hour .... 11:00 to 12:00 (558 vehicles)
AM Peak Hour Factor 88.9%
PM Peak Hour .... 12:45 to 13:45 (824 vehicles)
PM Peak Hour Factor 89.6%

24-Hour Moving Total

01:00-	7322	02:00-	7328	03:00-	7324	04:00-	7322	05:00-	7324	06:00-	7318	07:00-	7328	08:00-	7364
09:00-	7426	10:00-	7434	11:00-	7519	12:00-	7643	13:00-	7737	14:00-	7759	15:00-	7805	16:00-	7818
17:00-	7842	18:00-	7890	19:00-	7932	20:00-	8041	21:00-	8021	22:00-	8113	23:00-	8193	24:00-	8250

Saturday 10/04/97 Channel: 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Totals
138	50	42	21	28	59	83	115	174	263	382	502	549	630	604	780	781	754	678	550	426	438	256	156	8436
36	12	15	8	3	11	19	23	39	53	80	105	134	103	142	191	192	196	170	143	107	140	93	44	
23	15	11	4	9	16	19	22	33	60	85	128	134	149	155	192	202	189	149	143	118	121	57	52	
42	14	9	6	5	13	28	40	54	77	93	121	121	135	150	182	197	168	185	151	118	96	64	35	
37	9	7	3	11	19	22	24	48	73	123	148	160	157	157	185	190	201	174	113	83	81	42	27	

AM Peak Hour .... 11:00 to 12:00 (502 vehicles)
AM Peak Hour Factor 84.8%
PM Peak Hour .... 16:15 to 17:15 (785 vehicles)
PM Peak Hour Factor 97.2%

24-Hour Moving Total

01:00-	8325	02:00-	8346	03:00-	8367	04:00-	8367	05:00-	8341	06:00-	8294	07:00-	8174	08:00-	8072
09:00-	7994	10:00-	7968	11:00-	7912	12:00-	7856	13:00-	7693	14:00-	7544	15:00-	7507	16:00-	7712
17:00-	8011	18:00-	8261	19:00-	8445	20:00-	8491	21:00-	8489	22:00-	8466	23:00-	8437	24:00-	8436

Sunday 10/05/97 **Channel:** 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Total
116	54	36	16	23	28	46	55	96	155	241	310	440	520	615	636	720	597	476	451	209	189	105	74	620
26	[illegible]	4	4	3	4	8	17	9	41	52	72	91	118	145	174	178	153	131	140	74	46	37	23	
18	13	8	8	6	7	17	11	19	23	53	72	105	112	161	153	191	159	136	132	47	39	23	17	
41	14	18	1	7	7	8	14	29	42	62	88	114	142	146	161	190	150	128	96	49	58	25	21	
31	10	6	3	7	10	13	13	39	49	74	78	130	148	163	148	161	135	81	83	39	46	20	13	

AM Peak Hour .... 11:00 to 12:00 (310 vehicles)
AM Peak Hour Factor 88.1%
PM Peak Hour .... 16:00 to 17:00 (720 vehicles)
PM Peak Hour Factor 94.2%

24-Hour Moving Total

01:00- 8414	02:00- 8418	03:00- 8412	04:00- 8407	05:00- 8402	06:00- 8371	07:00- 8329	08:00- 8269
09:00- 8191	10:00- 8084	11:00- 7943	12:00- 7751	13:00- 7642	14:00- 7532	15:00- 7543	16:00- 7429
17:00- 7368	18:00- 7211	19:00- 7009	20:00- 6910	21:00- 6693	22:00- 6444	23:00- 6293	24:00- 6209

Monday 10/06/97 **Channel:** 1

0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Total
54	[illegible]	10	13	38	109	154	135	186	249	283														124
11	3	4	4	9	12	36	25	32	49	94														
12	4	2	2	4	13	54	44	39	57	81														
22	4	2	1	10	35	45	32	57	52	108														
9	5	2	6	15	49	19	34	58	77															

AM Peak Hour .... 09:45 to 10:45 (360 vehicles)
AM Peak Hour Factor 83.3%
PM Peak Hour .... Unavailable
PM Peak Hour Factor .... Unavailable

24-Hour Moving Total

01:00- 6147	02:00- 6110	03:00- 6084	04:00- 6081	05:00- 6096	06:00- 6177	07:00- 6285	08:00- 6365
09:00- 6455	10:00- 6544	11:00- N/A	12:00- N/A	13:00- N/A	14:00- N/A	15:00- N/A	16:00- N/A
17:00- N/A	18:00- N/A	19:00- N/A	20:00- N/A	21:00- N/A	22:00- N/A	23:00- N/A	24:00- N/A

AM APPROVED TRIPS

18-Apr-1997

PROJECT	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
PDC91-04-034	0	0	0	7	8	0	0	0	0	0	4	0
AM TOTAL	0	0	0	7	8	0	0	0	0	0	4	0

STREET 1: 280
STREET 2: MOORPARK

	LEFT	THRU	RIGHT
NORTH	0	0	0
EAST	0	8	7
SOUTH	0	0	0
WEST	0	4	0

NOTE: THESE TRIPS ARE OBTAINED BY REVERSING PM TRIPS WITH RETAIL TRIPS DEDUCTED AND ARE NOT APPLICABLE TO INTERSECTIONS OF ONE-WAY STREETS AND RAMPS

97-036

PM APPROVED TRIPS

18-Apr-1997

PROJECT	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
H95-05-038	0	0	5	0	0	0	0	0	0	0	0	0
PDC91-04-034	0	0	7	0	4	0	0	0	0	0	8	0
TOTAL	0	0	12	0	4	0	0	0	0	0	8	0

STREET 1: 280
STREET 2: MOORPARK

	LEFT	THRU	RIGHT
NORTH	12	0	0
EAST	0	4	0
SOUTH	0	0	0
WEST	0	3	0

AM APPROVED TRIPS 18-Apr-1997

PROJECT	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
CP91-02-006	0	0	0	0	27	0	0	0	139	0	44	17
PDC90-01-005	0	0	0	0	11	0	0	0	0	0	14	0
PDC95-08-040	0	0	0	0	0	0	0	0	0	0	24	24
AM TOTAL	0	0	0	0	38	0	0	0	139	0	82	41

STREET 1: 880
STREET 2: STEVENS CREEK

	LEFT	THRU	RIGHT
NORTH	0	0	0
EAST	0	38	0
SOUTH	139	0	0
WEST	41	82	0

NOTE: THESE TRIPS ARE OBTAINED BY REVERSING PM TRIPS WITH RETAIL TRIPS DEDUCTE
AND ARE NOT APPLICABLE TO INTERSECTIONS OF ONE-WAY STREETS AND RAMPS

PM APPROVED TRIPS 18-Apr-1997

PROJECT	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
CP91-02-006	17	0	0	0	44	0	0	0	0	139	87	0
H95-05-038	13	0	0	0	79	0	0	0	0	0	0	0
PDC90-01-005	0	0	0	0	14	0	0	0	0	0	11	0
PDC95-08-040	24	0	0	0	24	0	0	0	0	0	0	0
TOTAL	54	0	0	0	161	0	0	0	0	139	98	0

STREET 1: 880
STREET 2: STEVENS CREEK

	LEFT	THRU	RIGHT
NORTH	0	0	54
EAST	0	161	0
SOUTH	0	0	0
WEST	0	98	139

97-036

AM APPROVED TRIPS 18-Apr-1997

PROJECT	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
CP91-02-006	0	0	0	0	0	0	0	0	0	0	0	0
PDC90-01-005	0	8	0	0	0	0	0	17	0	0	0	0
AM TOTAL	0	8	0	0	0	0	0	17	0	0	0	0

STREET 1: BASCOM
STREET 2: MOORPARK

	LEFT	THRU	RIGHT
NORTH	0	8	0
EAST	0	0	0
SOUTH	0	17	0
WEST	0	0	0

NOTE: THESE TRIPS ARE OBTAINED BY REVERSING PM TRIPS WITH RETAIL TRIPS DEDUCTE
AND ARE NOT APPLICABLE TO INTERSECTIONS OF ONE-WAY STREETS AND RAMPS

97-036

PM APPROVED TRIPS

18-Apr-1997

PROJECT	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
CP91-02-006	0	0	0	0	0	0	0	0	0	0	0	0
PDC90-01-005	0	17	0	0	0	0	0	8	0	0	0	0
TOTAL	0	17	0	0	0	0	0	8	0	0	0	0

STREET 1: BASCOM
STREET 2: MOORPARK

	LEFT	THRU	RIGHT
NORTH	0	17	0
EAST	0	0	0
SOUTH	0	8	0
WEST	0	0	0

AM APPROVED TRIPS

18-Apr-1997

PROJECT	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
PDC90-01-005	25	0	0	0	9	0	0	0	21	8	4	10
AM TOTAL	25	0	0	0	9	0	0	0	21	8	4	10

STREET 1: BASCOM
STREET 2: NAGLEE

	LEFT	THRU	RIGHT
NORTH	0	0	25
EAST	0	9	0
SOUTH	21	0	0
WEST	10	4	8

NOTE: THESE TRIPS ARE OBTAINED BY REVERSING PM TRIPS WITH RETAIL TRIPS DEDUCTED AND ARE NOT APPLICABLE TO INTERSECTIONS OF ONE-WAY STREETS AND RAMPS

97-036

PM APPROVED TRIPS 18-Apr-1997

PROJECT	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
PDC90-01-005	10	0	0	0	4	0	0	0	8	21	9	25
TOTAL	10	0	0	0	4	0	0	0	8	21	9	25

STREET 1: BASCOM
STREET 2: NAGLEE

	LEFT	THRU	RIGHT
NORTH	0	0	10
EAST	0	4	0
SOUTH	8	0	0
WEST	25	9	21

97-036

AM APPROVED TRIPS 18-Apr-1997

PROJECT	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
CP91-02-006	0	0	0	0	20	0	0	0	0	0	5	0
PDC90-01-005	0	6	2	7	8	0	0	14	3	2	5	0
AM TOTAL	0	6	2	7	28	0	0	14	3	2	10	0

STREET 1: BASCOM
STREET 2: SAN CARLOS

	LEFT	THRU	RIGHT
NORTH	2	6	0
EAST	0	28	7
SOUTH	3	14	0
WEST	0	10	2

NOTE: THESE TRIPS ARE OBTAINED BY REVERSING PM TRIPS WITH RETAIL TRIPS DEDUCTED AND ARE NOT APPLICABLE TO INTERSECTIONS OF ONE-WAY STREETS AND RAMPS

97-036

PM APPROVED TRIPS 18-Apr-1997

PROJECT	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
CP91-02-006	0	0	0	0	5	0	0	0	0	0	20	0
H95-05-033	11	0	0	0	25	0	0	0	23	21	20	10
PDC90-01-005	0	14	7	2	5	0	0	6	2	3	8	0
TOTAL	11	14	7	2	35	0	0	6	25	24	48	10

STREET 1: BASCOM
STREET 2: SAN CARLOS

	LEFT	THRU	RIGHT
NORTH	7	14	11
EAST	0	35	2
SOUTH	25	6	0
WEST	10	48	24

AM APPROVED TRIPS 18-Apr-1997

PROJECT	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
CP91-02-006	0	0	0	0	20	0	0	0	0	0	5	0
PDC90-01-005	0	0	2	11	0	0	0	0	0	0	8	0
AM TOTAL	0	0	2	11	20	0	0	0	0	0	13	0

STREET 1: BELLEROSE
STREET 2: STEVENS CREEK

	LEFT	THRU	RIGHT
NORTH	2	0	0
EAST	0	20	11
SOUTH	0	0	0
WEST	0	13	0

NOTE: THESE TRIPS ARE OBTAINED BY REVERSING PM TRIPS WITH RETAIL TRIPS DEDUCTE
AND ARE NOT APPLICABLE TO INTERSECTIONS OF ONE-WAY STREETS AND RAMPS

PM APPROVED TRIPS 18-Apr-1997

PROJECT	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
CP91-02-006	0	0	0	0	5	0	0	0	0	0	20	0
H95-05-038	0	0	0	0	55	0	0	0	0	0	51	0
PDC90-01-005	0	0	11	2	8	0	0	0	0	0	0	0
TOTAL	0	0	11	2	68	0	0	0	0	0	71	0

STREET 1: BELLEROSE
STREET 2: STEVENS CREEK

	LEFT	THRU	RIGHT
NORTH	11	0	0
EAST	0	68	2
SOUTH	0	0	0
WEST	0	71	0

97-036

PM APPROVED TRIPS

18-Apr-1997

PROJECT	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
PDC90-01-005	0	0	0	0	0	0	0	0	6	0	0	0
TOTAL	0	0	0	0	0	0	0	0	6	0	0	0

STREET 1: HEDDING
STREET 2: MONROE

	LEFT	THRU	RIGHT
NORTH	0	0	0
EAST	0	0	0
SOUTH	6	0	0
WEST	0	0	0

AM APPROVED TRIPS

18-Apr-1997

PROJECT	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
PDC90-01-005	0	0	0	0	0	0	0	0	0	6	0	0
AM TOTAL	0	0	0	0	0	0	0	0	0	6	0	0

STREET 1: HEDDING
STREET 2: MONROE

	LEFT	THRU	RIGHT
NORTH	0	0	0
EAST	0	0	0
SOUTH	0	0	0
WEST	0	0	6

NOTE: THESE TRIPS ARE OBTAINED BY REVERSING PM TRIPS WITH RETAIL TRIPS DEDUCTE
AND ARE NOT APPLICABLE TO INTERSECTIONS OF ONE-WAY STREETS AND RAMPS

AM APPROVED TRIPS

18-Apr-1997

PROJECT	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
CP91-02-006	0	12	0	0	0	226	61	3	5	20	0	0
PDC90-01-005	0	0	0	0	11	0	0	0	0	0	14	0
PDC95-08-040	0	0	0	0	0	26	48	0	0	0	0	0
AM TOTAL	0	12	0	0	11	252	109	3	5	20	14	0

STREET 1: MONROE
STREET 2: STEVENS CREEK

	LEFT	THRU	RIGHT
NORTH	0	12	0
EAST	252	11	0
SOUTH	5	3	109
WEST	0	14	20

NOTE: THESE TRIPS ARE OBTAINED BY REVERSING PM TRIPS WITH RETAIL TRIPS DEDUCTE
AND ARE NOT APPLICABLE TO INTERSECTIONS OF ONE-WAY STREETS AND RAMPS

97-036

PM APPROVED TRIPS 18-Apr-1997

PROJECT	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
CP91-02-006	0	3	0	0	0	61	126	12	20	5	0	0
H95-05-038	22	0	0	0	92	0	47	0	0	0	46	81
PDC90-01-005	0	0	0	0	14	0	0	0	0	0	11	0
PDC95-08-040	0	0	0	0	0	48	26	0	0	0	0	0
TOTAL	22	3	0	0	106	109	199	12	20	5	57	81

STREET 1: MONROE
STREET 2: STEVENS CREEK

	LEFT	THRU	RIGHT
NORTH	0	3	22
EAST	109	106	0
SOUTH	20	12	199
WEST	81	57	5

97-036

AM APPROVED TRIPS 18-Apr-1997

PROJECT	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
PDC96-06-033	0	0	0	0	2	0	0	0	1	2	4	0
AM TOTAL	0	0	0	0	2	0	0	0	1	2	4	0

STREET 1: SAN TOMAS
STREET 2: STEVENS CREEK

	LEFT	THRU	RIGHT
NORTH	0	0	0
EAST	0	2	0
SOUTH	1	0	0
WEST	0	4	2

NOTE: THESE TRIPS ARE OBTAINED BY REVERSING PM TRIPS WITH RETAIL TRIPS DEDUCTED AND ARE NOT APPLICABLE TO INTERSECTIONS OF ONE-WAY STREETS AND RAMPS

PM APPROVED TRIPS 18-Apr-1997

PROJECT	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
PDC96-06-033	0	0	0	0	4	0	0	0	2	1	2	0
TOTAL	0	0	0	0	4	0	0	0	2	1	2	0

STREET 1: SAN TOMAS
STREET 2: STEVENS CREEK

	LEFT	THRU	RIGHT
NORTH	0	0	0
EAST	0	4	0
SOUTH	2	0	0
WEST	0	2	1

97-036

AM APPROVED TRIPS 18-Apr-1997

PROJECT	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
CP91-02-006	19	7	0	0	0	0	0	28	0	0	0	12
PDC91-04-034	0	7	3	3	6	0	0	8	9	3	1	0
PDC95-08-040	20	4	0	0	0	0	0	2	0	0	0	0
AM TOTAL	39	18	3	3	6	0	0	38	9	3	1	12

STREET 1: MOORPARK
STREET 2: WINCHESTER

	LEFT	THRU	RIGHT
NORTH	3	18	39
EAST	0	6	3
SOUTH	9	38	0
WEST	12	1	3

NOTE: THESE TRIPS ARE OBTAINED BY REVERSING PM TRIPS WITH RETAIL TRIPS DEDUCTE AND ARE NOT APPLICABLE TO INTERSECTIONS OF ONE-WAY STREETS AND RAMPS

97-036

PM APPROVED TRIPS 18-Apr-1997

PROJECT	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
CP91-02-006	12	33	0	0	0	0	0	7	0	0	0	19
H95-05-038	0	20	0	0	0	0	0	20	0	0	0	5
PDC91-04-034	0	3	3	3	1	0	0	7	3	9	6	0
PDC95-08-040	0	2	0	0	0	0	0	4	0	0	0	20
TOTAL	12	58	3	3	1	0	0	38	3	9	6	44

STREET 1: MOORPARK
STREET 2: WINCHESTER

	LEFT	THRU	RIGHT
NORTH	3	58	12
EAST	0	1	3
SOUTH	3	38	0
WEST	44	6	9

97-036

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                               AM APPROVED TRIPS                      18-Apr-1997

   PROJECT              M1    M2    M3    M4    M5    M6    M7    M8    M9   M10   M11   M12
 PDC96-06-033            1     0     0     0     3     0     0     0     0     0     6     3
---------------------------------------------------------------------------------------------
           AM TOTAL      1     0     0     0     3     0     0     0     0     0     6     3
---------------------------------------------------------------------------------------------
   STREET 1:  SARATOGA
   STREET 2:  STEVENS CREEK

                             LEFT   THRU   RIGHT

               NORTH           0      0      1
               EAST            0      3      0
               SOUTH           0      0      0
               WEST            3      6      0
---------------------------------------------------------------------------------------------
NOTE: THESE TRIPS ARE OBTAINED BY REVERSING PM TRIPS WITH RETAIL TRIPS DEDUCTED
      AND ARE NOT APPLICABLE TO INTERSECTIONS OF ONE-WAY STREETS AND RAMPS
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PM APPROVED TRIPS 18-Apr-1997

PROJECT	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
PDC96-06-033	3	0	0	0	6	0	0	0	0	0	3	1
TOTAL	3	0	0	0	6	0	0	0	0	0	3	1

STREET 1: SARATOGA
STREET 2: STEVENS CREEK

	LEFT	THRU	RIGHT
NORTH	0	0	3
EAST	0	6	0
SOUTH	0	0	0
WEST	1	3	0

97-036

AM APPROVED TRIPS

18-Apr-1997

PROJECT	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
CP91-02-106	0	0	0	0	5	0	0	0	0	0	20	0
PDC95-08-040	0	0	0	0	8	0	0	0	0	0	4	0
AM TOTAL	0	0	0	0	13	0	0	0	0	0	24	0

STREET 1: EMPORIUM
STREET 2: STEVENS CREEK

	LEFT	THRU	RIGHT
NORTH	0	0	0
EAST	0	13	0
SOUTH	0	0	0
WEST	0	24	0

NOTE: THESE TRIPS ARE OBTAINED BY REVERSING PM TRIPS WITH RETAIL TRIPS DEDUCTE
AND ARE NOT APPLICABLE TO INTERSECTIONS OF ONE-WAY STREETS AND RAMPS

PM APPROVED TRIPS 18-Apr-1997

PROJECT	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
CP91-02-006	0	0	0	0	20	0	0	0	0	0	5	0
H95-05-038	0	0	0	0	62	0	0	0	0	0	90	0
PDC95-08-040	0	0	0	0	4	0	0	0	0	0	8	0
TOTAL	0	0	0	0	86	0	0	0	0	0	103	0

STREET 1: EMPORIUM
STREET 2: STEVENS CREEK

	LEFT	THRU	RIGHT
NORTH	0	0	0
EAST	0	86	0
SOUTH	0	0	0
WEST	0	103	0

97-036

AM APPROVED TRIPS 18-Apr-1997

PROJECT	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
CP91-02-006	0	0	0	0	5	0	0	0	0	0	20	0
PDC95-08-040	0	0	0	0	0	0	0	0	8	4	0	0
AM TOTAL	0	0	0	0	5	0	0	0	8	4	20	0

STREET 1: REDWOOD
STREET 2: STEVENS CREEK

	LEFT	THRU	RIGHT
NORTH	0	0	0
EAST	0	5	0
SOUTH	8	0	0
WEST	0	20	4

NOTE: THESE TRIPS ARE OBTAINED BY REVERSING PM TRIPS WITH RETAIL TRIPS DEDUCTED AND ARE NOT APPLICABLE TO INTERSECTIONS OF ONE-WAY STREETS AND RAMPS

97-036

PM APPROVED TRIPS

18-Apr-1997

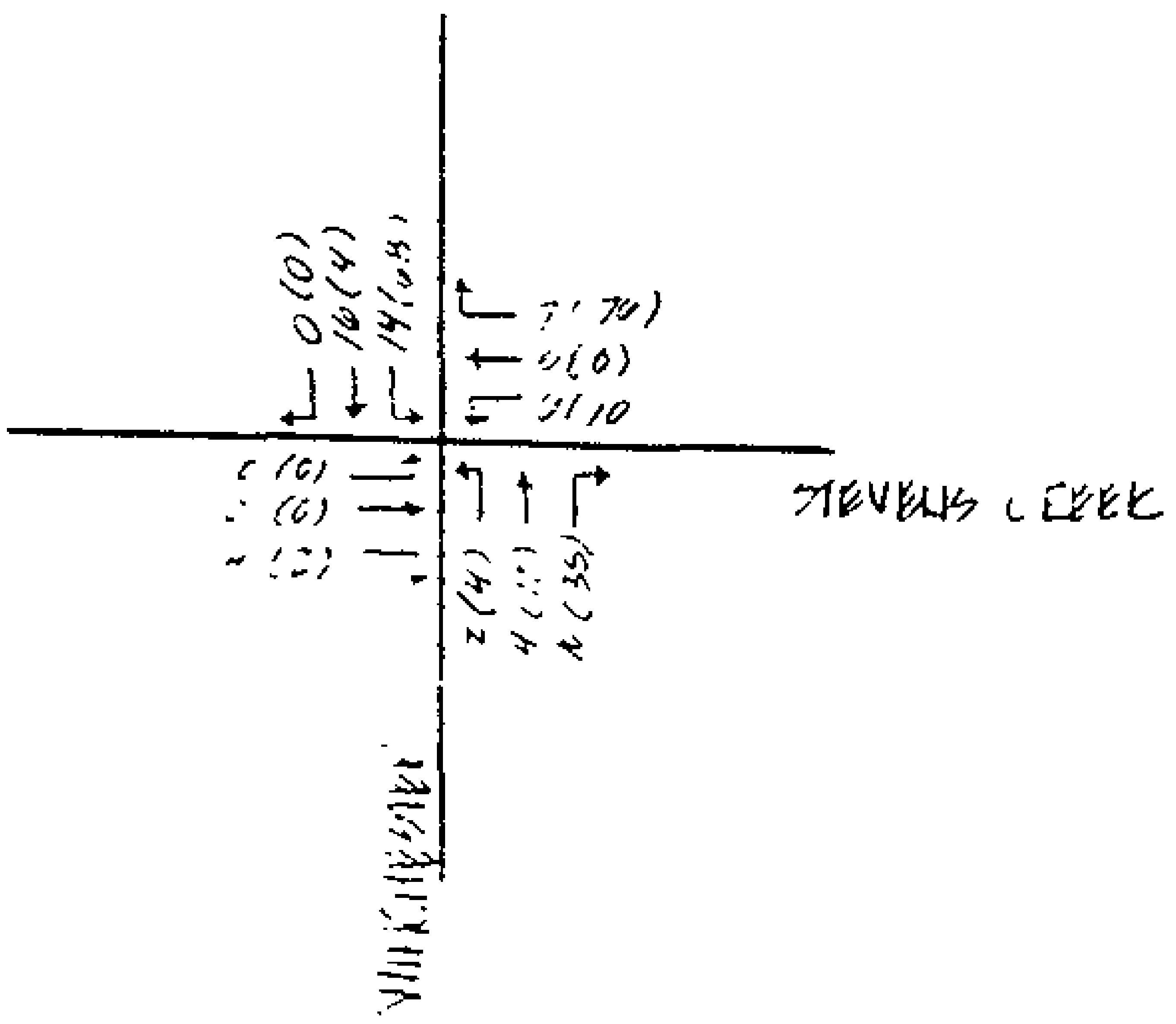
PROJECT	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
CP91-02-006	0	0	0	0	20	0	0	0	0	0	5	0
H95-05-038	0	0	0	0	62	114	0	0	0	0	90	0
PDC95-08-040	0	0	0	0	0	0	0	0	4	8	0	0
TOTAL	0	0	0	0	82	114	0	0	4	8	95	0

STREET 1: REDWOOD
STREET 2: STEVENS CREEK

	LEFT	THRU	RIGHT
NORTH	0	0	0
EAST	114	82	0
SOUTH	4	0	0
WEST	0	95	8

97-036

STEVENS CREEK BLVD / WINCHESTER BLVD.
(INTERPOLATED FROM SURROUNDING INTERSECTIONS)



AM PEAK HOUR

14	16	0
0	0	7
2	4	10
0	0	4

PM PEAK HOUR

68	4	0
10	0	76
4	12	35
0	0	2

PM APPROVED TRIPS 18-Apr-1997

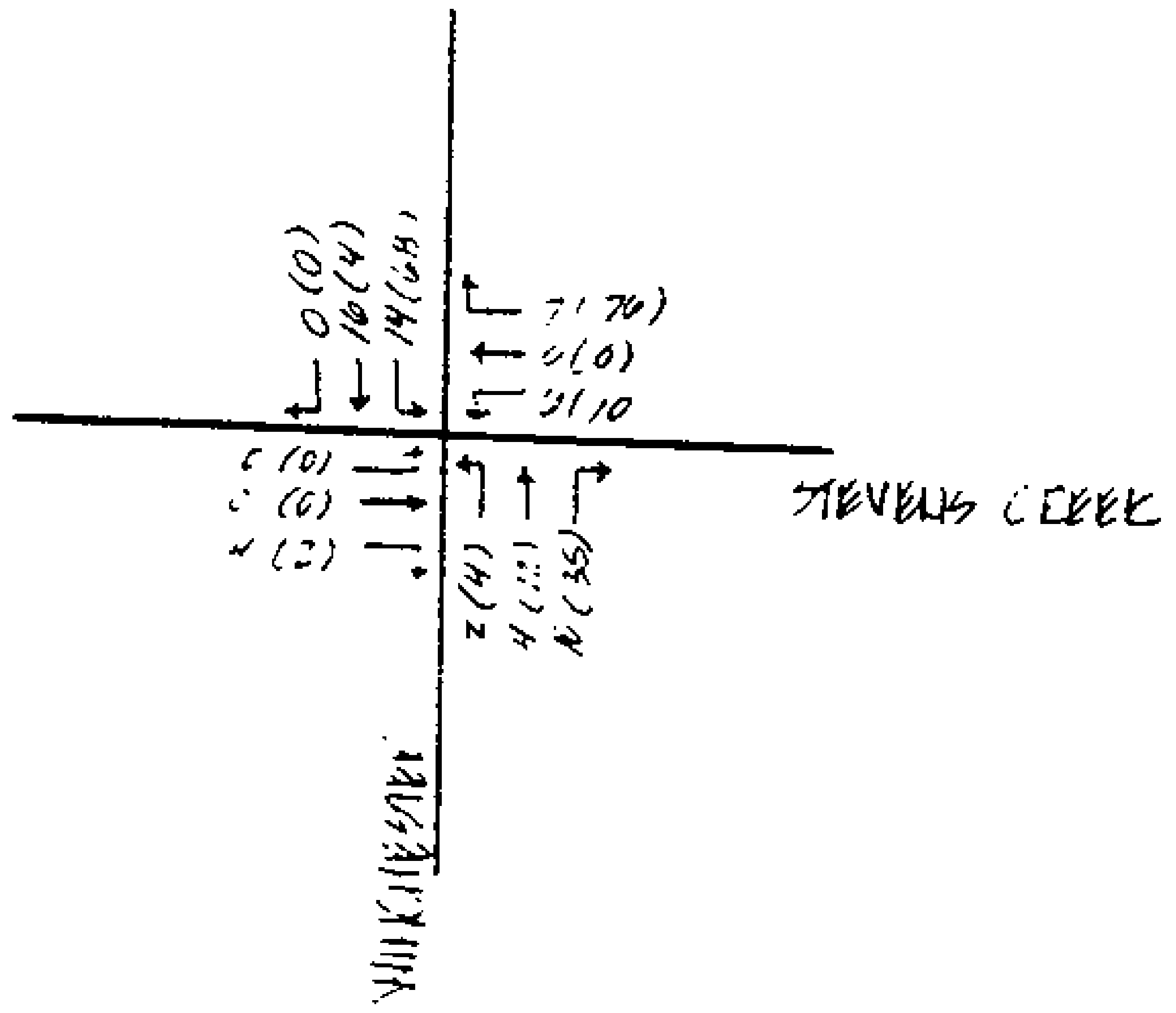
PROJECT	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
CP91-02-006	0	0	0	0	20	0	0	0	0	0	5	0
H95-05-038	0	0	0	0	62	114	0	0	0	0	90	0
PDC95-08-040	0	0	0	0	0	0	0	0	4	8	0	0
TOTAL	0	0	0	0	82	114	0	0	4	8	95	0

STREET 1: REDWOOD
STREET 2: STEVENS CREEK

	LEFT	THRU	RIGHT
NORTH	0	0	0
EAST	114	82	0
SOUTH	4	0	0
WEST	0	95	8

97-036

STEVENS CREEK BLVD / WINCHESTER BLVD.
(INTERPOLATED FROM SURROUNDING INTERSECTIONS)



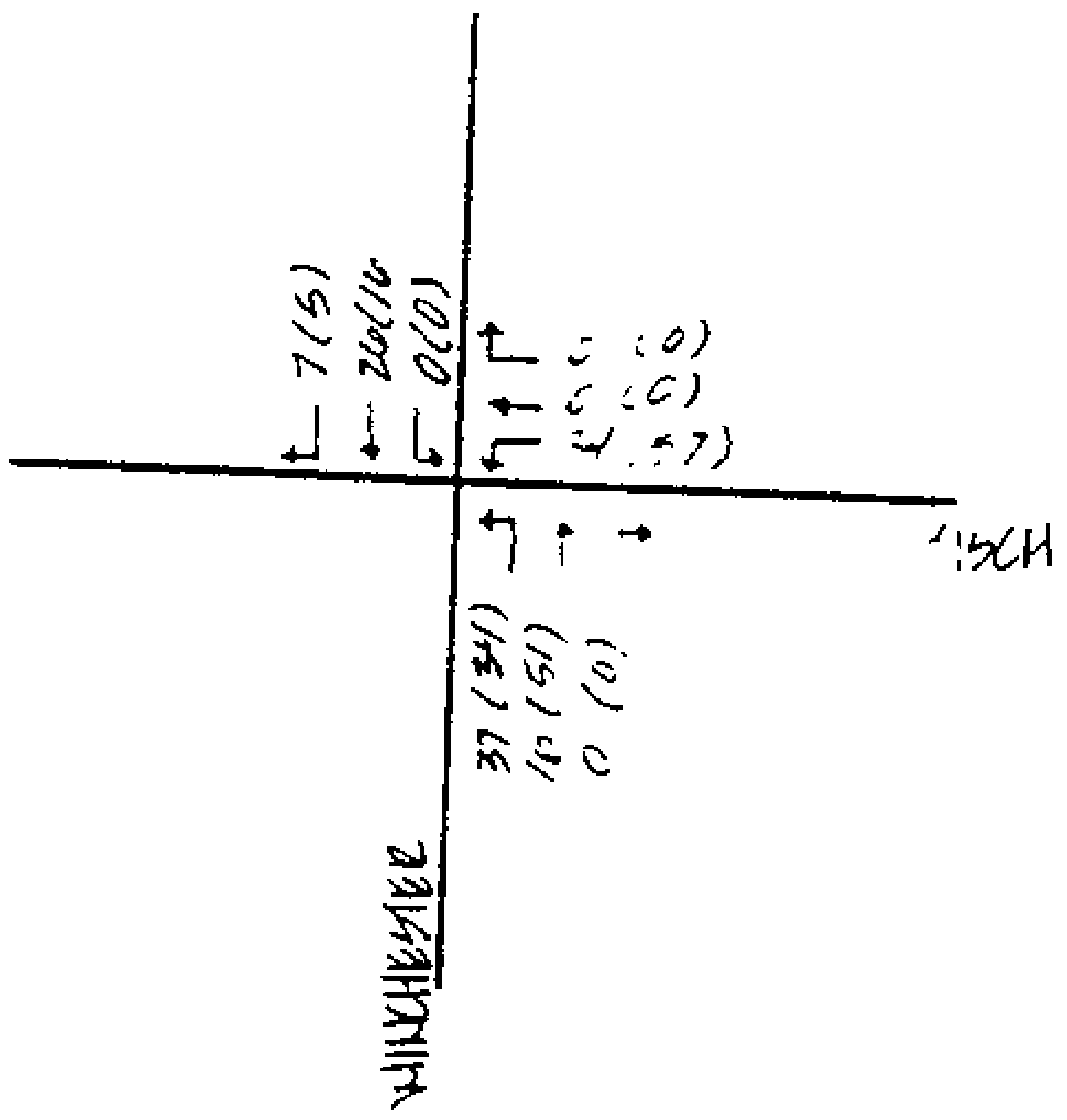
AM PEAK HOUR

14	16	0
0	0	7
2	4	10
0	0	4

PM PEAK HOUR

68	4	0
10	0	76
4	12	35
0	0	2

WINCHESTER BLVD. / TISCH WY.
(INTERPOLATED FROM SURROUNDING INTERSECTIONS)



AM PEAK HOUR

0	26	7
34	0	0
37	16	0
0	0	0

PM PEAK HOUR

0	16	5
57	0	0
34	51	0
0	0	0

AM APPROVED TRIPS 18-Apr-1997

PROJECT	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
CP91-02-006	0	20	0	0	0	0	0	5	0	0	0	0
PDC91-04-034	0	6	0	0	0	0	0	11	0	0	0	0
AM TOTAL	0	26	0	0	0	0	0	16	0	0	0	0

STREET 1: OLSEN
STREET 2: WINCHESTER

	LEFT	THRU	RIGHT
NORTH	0	26	0
EAST	0	0	0
SOUTH	0	16	0
WEST	0	0	0

NOTE: THESE TRIPS ARE OBTAINED BY REVERSING PM TRIPS WITH RETAIL TRIPS DEDUCTE AND ARE NOT APPLICABLE TO INTERSECTIONS OF ONE-WAY STREETS AND RAMPS

PM APPROVED TRIPS 18-Apr-1997

PROJECT	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
CP91-02-006	0	5	0	0	0	0	0	20	0	0	0	0
H95-05-038	0	0	0	0	0	0	0	25	0	0	0	0
PDC91-04-034	0	11	0	0	0	0	0	6	0	0	0	0
TOTAL	0	16	0	0	0	0	0	51	0	0	0	0

STREET 1: OLSEN
STREET 2: WINCHESTER

	LEFT	THRU	RIGHT
NORTH	0	16	0
EAST	0	0	0
SOUTH	0	51	0
WEST	0	0	0

97-036

AM APPROVED TRIPS 18-Apr-1997

PROJECT	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
CP91-02-006	0	20	0	0	0	0	0	5	0	0	0	0
PDC91-04-034	0	6	0	0	0	0	0	11	0	0	0	0
AM TOTAL	0	26	0	0	0	0	0	16	0	0	0	0

STREET 1: OLIN
STREET 2: WINCHESTER

	LEFT	THRU	RIGHT
NORTH	0	26	0
EAST	0	0	0
SOUTH	0	16	0
WEST	0	0	0

NOTE: THESE TRIPS ARE OBTAINED BY REVERSING PM TRIPS WITH RETAIL TRIPS DEDUCTE
AND ARE NOT APPLICABLE TO INTERSECTIONS OF ONE-WAY STREETS AND RAMPS

PM APPROVED TRIPS

18-Apr-1997

PROJECT	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
CP91-02-006	0	5	0	0	0	0	0	20	0	0	0	0
H95-05-038	0	0	0	0	0	0	0	25	0	0	0	0
PDC91-04-034	0	11	0	0	0	0	0	6	0	0	0	0
TOTAL	0	16	0	0	0	0	0	51	0	0	0	0

STREET 1: OLIN
STREET 2: WINCHESTER

	LEFT	THRU	RIGHT
NORTH	0	16	0
EAST	0	0	0
SOUTH	0	51	0
WEST	0	0	0

97-036

```
                           LEVEL OF SERVICE ANALYSIS
===========================================================================
LOCATION:          I-280 & MOORPARK
MESSAGE:           PROJECT CONDITIONS      SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:         AM                      N-S       30.00    3.00
COUNT DATE:        4/9/97                  E-W       30.00    4.00
ANAL. DATE:        7/2/97
ANAL. INIT:        RD                      CYCLE LENGTH =  67
GROWTH FACTOR % :     0.0                  LOST TIME    =  0.104
-------------------------------------------------------------------------
LEG  PATTERN      LANE             APPROVED     PROJECT          TOTAL
                 COUNTS              TRIPS       TRIPS           TRIPS
     LSTSRO    LT   THRU   RT    LT THRU  RT   LT THRU RT     LT  THRU   RT
 N   300100   756     0    13    16    0   0   55    0   0   827     0   13
 E   002000     0   467     0     0    8   0    0    1   0     0   476    0
 S   000000     0     0     0     0    0   0    0    0   0     0     0    0
 W   002000     0   507     0     0    4   0    0    3   0     0   514    0
=========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
              L S T S R O                            LANE     G/C
=========================================================================
 N       3    3 0 0 0 0 0    756     4221    0.179   0.345   0.524    2212
 E       0    0 0 0 0 0 0      0        0    0.000   0.000   0.000       0
 S       0    0 0 0 0 0 0      0        0    0.000   0.000   0.000       0
 W       2    0 0 2 0 0 0    507     3560    0.142   0.230   0.372    1324
                                          LT = 0.104
TOTALS  5                   1263             0.425                    3536
                                     1 - 0.425 = 0.575 /  5 = 0.115
                                                              V/C = 0.357
                              EXISTING          LEVEL OF SERVICE =   A
-------------------------------------------------------------------------
 N       3    3 0 0 0 0 0    772     4221    0.183   0.341   0.524    2212
 E       0    0 0 0 0 0 0      0        0    0.000   0.000   0.000       0
 S       0    0 0 0 0 0 0      0        0    0.000   0.000   0.000       0
 W       2    0 0 2 0 0 0    511     3560    0.144   0.228   0.372    1324
                                          LT = 0.104
TOTALS  5                   1283             0.431                    3536
                                     1 - 0.431 = 0.569 /  5 = 0.114
                                                              V/C = 0.363
                         EXISTING + APPROVED    LEVEL OF SERVICE =   A
-------------------------------------------------------------------------
 N       3    3 0 0 0 0 0    827     4221    0.196   0.334   0.530    2237
 E       0    0 0 0 0 0 0      0        0    0.000   0.000   0.000       0
 S       0    0 0 0 0 0 0      0        0    0.000   0.000   0.000       0
 W       2    0 0 2 0 0 0    514     3560    0.144   0.222   0.366    1303
                                          LT = 0.104
TOTALS  5                   1341             0.444                    3540
                                     1 - 0.444 = 0.556 /  5 = 0.111
                                                              V/C = 0.379
               EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   A
=========================================================================
( 1341 - 1283 )/ 1283 =   4.52 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                          LEVEL OF SERVICE ANALYSIS
==========================================================================
LOCATION:       I-280 & MOORPARK
MESSAGE:        CUMULATIVE CONDITIONS  SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:      AM                     N-S      30.00    3.00
COUNT DATE:     4/9/97                 E-W      30.00    4.00
ANAL. DATE:     7/2/97
ANAL. INIT:     RD                     CYCLE LENGTH =  67
GROWTH FACTOR % :     0.0              LOST TIME    =  0.104
-------------------------------------------------------------------------
LEG  PATTERN      LANE            APPROVED     PROJECT         TOTAL
                 COUNTS             TRIPS        TRIPS          TRIPS
     LSTSRO    LT   THRU   RT    LT THRU  RT   LT THRU RT    LT  THRU   RT
 N   300100   756     0   13    16    0    0   60   0   0   832    0   13
 E   002000     0   467    0     0    8    0    0   1   0     0  476    0
 S   000000     0     0    0     0    0    0    0   0   0     0    0    0
 W   002000     0   507    0     0    4    0    0   3   0     0  514    0
=========================================================================
LEG  # LANES  CRIT. MOVE    C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
                L S T S R O                           LANE     G/C
=========================================================================
 N      3     3 0 0 0 0 0     756     4221    0.179   0.345   0.524    2212
 E      0     0 0 0 0 0 0       0        0    0.000   0.000   0.000       0
 S      0     0 0 0 0 0 0       0        0    0.000   0.000   0.000       0
 W      2     0 0 2 0 0 0     507     3560    0.142   0.230   0.372    1324
                                          LT = 0.104
TOTALS  5                    1263              0.425                   3536
                                       1 - 0.425 = 0.575 /  5 = 0.115
                                                               V/C = 0.357
                                EXISTING          LEVEL OF SERVICE =    A
-------------------------------------------------------------------------
 N      3     3 0 0 0 0 0     772     4221    0.183   0.341   0.524    2212
 E      0     0 0 0 0 0 0       0        0    0.000   0.000   0.000       0
 S      0     0 0 0 0 0 0       0        0    0.000   0.000   0.000       0
 W      2     0 0 2 0 0 0     511     3560    0.144   0.228   0.372    1324
                                          LT = 0.104
TOTALS  5                    1283              0.431                   3536
                                       1 - 0.431 = 0.569 /  5 = 0.114
                                                               V/C = 0.363
                           EXISTING + APPROVED    LEVEL OF SERVICE =    A
-------------------------------------------------------------------------
 N      3     3 0 0 0 0 0     832     4221    0.197   0.333   0.530    2237
 E      0     0 0 0 0 0 0       0        0    0.000   0.000   0.000       0
 S      0     0 0 0 0 0 0       0        0    0.000   0.000   0.000       0
 W      2     0 0 2 0 0 0     514     3560    0.144   0.222   0.366    1303
                                          LT = 0.104
TOTALS  5                    1346              0.445                   3540
                                       1 - 0.445 = 0.555 /  5 = 0.111
                                                               V/C = 0.380
                  EXISTING + APPROVED + PROJECT   LEVEL OF SERVICE =    A
=========================================================================
( 1346 - 1283 )/ 1283 =   4.91 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

```
                         LEVEL OF SERVICE ANALYSIS
======================================================================
LOCATION:       I-280 & MOORPARK
MESSAGE:        PROJECT CONDITIONS     SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:      PM                     N-S      30.00    3.00
COUNT DATE:     10/96                  E-W      30.00    4.00
ANAL. DATE:     7/2/97
ANAL. INIT:     RD                     CYCLE LENGTH =  67
GROWTH FACTOR % :    3.0               LOST TIME     =  0.104
----------------------------------------------------------------------
LEG  PATTERN      LANE            APPROVED     PROJECT          TOTAL
                  COUNTS            TRIPS       TRIPS            TRIPS
     LSTSRO    LT   THRU   RT    LT THRU  RT    LT THRU RT     LT   THRU   RT
 N   300100   883     0   185    12    0   0   124    0  0   1045      0  191
 E   002000     0   665     0     0    4   0     0    9  0      0    698    0
 S   000000     0     0     0     0    0   0     0    0  0      0      0    0
 W   002000     0   536     0     0    8   0     0    9  0      0    569    0
======================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C     ADJ./   ADJ.   C. CAP.
              L S T S R O                             LANE    G/C
======================================================================
 N       3    3 0 0 0 0 0    883     4221    0.209   0.300   0.509    2148
 E       2    0 0 2 0 0 0    665     3560    0.187   0.200   0.387    1378
 S       0    0 0 0 0 0 0      0        0    0.000   0.000   0.000       0
 W       0    0 0 0 0 0 0      0        0    0.000   0.000   0.000       0
                                         LT = 0.104
TOTALS   5                  1548             0.500                    3526
                                       1 - 0.500 = 0.500 /  5 = 0.100
                                                               V/C = 0.439
                                 EXISTING            LEVEL OF SERVICE =   A
----------------------------------------------------------------------
 N       3    3 0 0 0 0 0    921     4221    0.218   0.290   0.508    2144
 E       2    0 0 2 0 0 0    689     3560    0.194   0.194   0.388    1381
 S       0    0 0 0 0 0 0      0        0    0.000   0.000   0.000       0
 W       0    0 0 0 0 0 0      0        0    0.000   0.000   0.000       0
                                         LT = 0.104
TOTALS   5                  1610             0.516                    3525
                                       1 - 0.516 = 0.484 /  5 = 0.097
                                                               V/C = 0.457
                            EXISTING + APPROVED      LEVEL OF SERVICE =   A
----------------------------------------------------------------------
 N       3    3 0 0 0 0 0   1045     4221    0.248   0.271   0.519    2191
 E       2    0 0 2 0 0 0    698     3560    0.196   0.181   0.377    1342
 S       0    0 0 0 0 0 0      0        0    0.000   0.000   0.000       0
 W       0    0 0 0 0 0 0      0        0    0.000   0.000   0.000       0
                                         LT = 0.104
TOTALS   5                  1743             0.548                    3533
                                       1 - 0.548 = 0.452 /  5 = 0.090
                                                               V/C = 0.493
                  EXISTING + APPROVED + PROJECT      LEVEL OF SERVICE =   A
======================================================================
( 1743 - 1610 )/ 1610 =   8.26 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                          LEVEL OF SERVICE ANALYSIS
=============================================================================
LOCATION:        I-280 & MOORPARK
MESSAGE:         CUMULATIVE CONDITIONS  SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:       PM                     N-S      30.00    3.00
COUNT DATE:      10/96                  E-W      30.00    4.00
ANAL. DATE:      7/2/97
ANAL. INIT:      RD                     CYCLE LENGTH =  67
GROWTH FACTOR % :     3.0               LOST TIME    =  0.104
---------------------------------------------------------------------------
LEG  PATTERN       LANE            APPROVED     PROJECT         TOTAL
                  COUNTS             TRIPS       TRIPS           TRIPS
     LSTSRO     LT  THRU   RT     LT THRU  RT   LT THRU RT    LT  THRU   RT
 N   300100    883     0  185     12    0   0  142    0  0  1063     0  191
 E   002000      0   665    0      0    4   0    0    9  0     0   698    0
 S   000000      0     0    0      0    0   0    0    0  0     0     0    0
 W   002000      0   536    0      0    8   0    0    9  0     0   569    0
===========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.    G/C    ADJ./    ADJ.   C. CAP.
              L S T S R O                              LANE     G/C
===========================================================================
 N      3    3 0 0 0 0 0     883     4221    0.209   0.300   0.509    2148
 E      2    0 0 2 0 0 0     665     3560    0.187   0.200   0.387    1378
 S      0    0 0 0 0 0 0       0        0    0.000   0.000   0.000       0
 W      0    0 0 0 0 0 0       0        0    0.000   0.000   0.000       0
                                          LT = 0.104
TOTALS  5                   1548             0.500                    3526
                                        1 - 0.500 = 0.500 /  5 = 0.100
                                                             V/C = 0.439
                                  EXISTING           LEVEL OF SERVICE =   A
---------------------------------------------------------------------------
 N      3    3 0 0 0 0 0     921     4221    0.218   0.290   0.508    2144
 E      2    0 0 2 0 0 0     689     3560    0.194   0.194   0.388    1381
 S      0    0 0 0 0 0 0       0        0    0.000   0.000   0.000       0
 W      0    0 0 0 0 0 0       0        0    0.000   0.000   0.000       0
                                          LT = 0.104
TOTALS  5                   1610             0.516                    3525
                                        1 - 0.516 = 0.484 /  5 = 0.097
                                                             V/C = 0.457
                              EXISTING + APPROVED    LEVEL OF SERVICE =   A
---------------------------------------------------------------------------
 N      3    3 0 0 0 0 0    1063     4221    0.252   0.269   0.521  · 2199
 E      2    0 0 2 0 0 0     698     3560    0.196   0.179   0.375    1335
 S      0    0 0 0 0 0 0       0        0    0.000   0.000   0.000       0
 W      0    0 0 0 0 0 0       0        0    0.000   0.000   0.000       0
                                          LT = 0.104
TOTALS  5                   1761             0.552                    3534
                                        1 - 0.552 = 0.448 /  5 = 0.090
                                                             V/C = 0.498
                   EXISTING + APPROVED + PROJECT     LEVEL OF SERVICE =   A
===========================================================================
( 1761 - 1610 )/ 1610 =   9.38 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

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                         LEVEL OF SERVICE ANALYSIS
============================================================================
LOCATION:      I-880 & STEVENS CREEK
MESSAGE:       PROJECT CONDITIONS       SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:     AM                       N-S      20.50    4.50
COUNT DATE:    4/15/97                  E-W      36.50   14.50
ANAL. DATE:    7/2/97
ANAL. INIT:    RD                       CYCLE LENGTH =  126
GROWTH FACTOR % :    0.0                LOST TIME    =  0.151
---------------------------------------------------------------------------
LEG  PATTERN      LANE           APPROVED     PROJECT          TOTAL
                 COUNTS            TRIPS       TRIPS            TRIPS
     LSTSRO    LT  THRU   RT    LT THRU  RT   LT THRU RT    LT  THRU   RT
 N   000020    0     0  426     0    0 146    0   0  87     0     0  659
 E   003000    0  1034    0     0  117   0    0  68   0     0  1219    0
 S   000000    0     0    0     0    0   0    0   0   0     0     0    0
 W   000000    0     0    0     0    0   0    0   0   0     0     0    0
===========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
              L S T S R O                              LANE    G/C
===========================================================================
 N      0     0 0 0 0 0 0      0        0    0.000   0.000   0.000       0
 E      3     0 0 3 0 0 0   1034     5340    0.194   0.655   0.849    4534
 S      0     0 0 0 0 0 0      0        0    0.000   0.000   0.000       0
 W      0     0 0 0 0 0 0      0        0    0.000   0.000   0.000       0
                                         LT = 0.151
TOTALS  3                   1034             0.345                    4534
                                    1 - 0.345 = 0.655 /  3 = 0.218
                                                          V/C = 0.228
                           EXISTING           LEVEL OF SERVICE =   A
---------------------------------------------------------------------------
 N      0     0 0 0 0 0 0      0        0    0.000   0.000   0.000       0
 E      3     0 0 3 0 0 0   1151     5340    0.216   0.633   0.849    4534
 S      0     0 0 0 0 0 0      0        0    0.000   0.000   0.000       0
 W      0     0 0 0 0 0 0      0        0    0.000   0.000   0.000       0
                                         LT = 0.151
TOTALS  3                   1151             0.367                    4534
                                    1 - 0.367 = 0.633 /  3 = 0.211
                                                          V/C = 0.254
                        EXISTING + APPROVED   LEVEL OF SERVICE =   A
---------------------------------------------------------------------------
 N      0     0 0 0 0 0 0      0        0    0.000   0.000   0.000       0
 E      3     0 0 3 0 0 0   1219     5340    0.228   0.621   0.849    4534
 S      0     0 0 0 0 0 0      0        0    0.000   0.000   0.000       0
 W      0     0 0 0 0 0 0      0        0    0.000   0.000   0.000       0
                                         LT = 0.151
TOTALS  3                   1219             0.379                    4534
                                    1 - 0.379 = 0.621 /  3 = 0.207
                                                          V/C = 0.269
                 EXISTING + APPROVED + PROJECT   LEVEL OF SERVICE =   A
===========================================================================
( 1219 - 1151 )/ 1151 =   5.91 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                        LEVEL OF SERVICE ANALYSIS
============================================================================
LOCATION:        I-880 & STEVENS CREEK
MESSAGE:         CUMULATIVE CONDITIONS  SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:       AM                     N-S      20.50    4.50
COUNT DATE:      4/15/97                E-W      86.50   14.50
ANAL. DATE:      7/2/97
ANAL. INIT:      RD                     CYCLE LENGTH =  126
GROWTH FACTOR % :     0.0               LOST TIME    =  0.151
--------------------------------------------------------------------------
LEG  PATTERN       LANE            APPROVED      PROJECT           TOTAL
                  COUNTS             TRIPS         TRIPS            TRIPS
     LSTSRO     LT  THRU   RT     LT THRU  RT    LT THRU RT     LT  THRU   RT
 N   000020      0     0  426      0    0 146     0    0 93      0     0  665
 E   003000      0  1034    0      0  117   0     0   87  0      0  1238    0
 S   000000      0     0    0      0    0   0     0    0  0      0     0    0
 W   000000      0     0    0      0    0   0     0    0  0      0     0    0
==========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
              L S T S R O                             LANE     G/C
==========================================================================
 N       0    0 0 0 0 0 0       0        0   0.000   0.000   0.000       0
 E       3    0 0 3 0 0 0    1034     5340   0.194   0.655   0.849    4534
 S       0    0 0 0 0 0 0       0        0   0.000   0.000   0.000       0
 W       0    0 0 0 0 0 0       0        0   0.000   0.000   0.000       0
                                          LT = 0.151
TOTALS   3                   1034            0.345                    4534
                                      1 - 0.345 = 0.655 /  3 = 0.218
                                                              V/C = 0.228
                                 EXISTING           LEVEL OF SERVICE =   A
--------------------------------------------------------------------------
 N       0    0 0 0 0 0 0       0        0   0.000   0.000   0.000       0
 E       3    0 0 3 0 0 0    1151     5340   0.216   0.633   0.849    4534
 S       0    0 0 0 0 0 0       0        0   0.000   0.000   0.000       0
 W       0    0 0 0 0 0 0       0        0   0.000   0.000   0.000       0
                                          LT = 0.151
TOTALS   3                   1151            0.367                    4534
                                      1 - 0.367 = 0.633 /  3 = 0.211
                                                              V/C = 0.254
                            EXISTING + APPROVED     LEVEL OF SERVICE =   A
--------------------------------------------------------------------------
 N       0    0 0 0 0 0 0       0        0   0.000   0.000   0.000       0
 E       3    0 0 3 0 0 0    1238     5340   0.232   0.617   0.849    4534
 S       0    0 0 0 0 0 0       0        0   0.000   0.000   0.000       0
 W       0    0 0 0 0 0 0       0        0   0.000   0.000   0.000       0
                                          LT = 0.151
TOTALS   3                   1238            0.383                    4534
                                      1 - 0.383 = 0.617 /  3 = 0.206
                                                              V/C = 0.273
                  EXISTING + APPROVED + PROJECT     LEVEL OF SERVICE =   A
==========================================================================
( 1238 - 1151 )/ 1151 =   7.56 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                        LEVEL OF SERVICE ANALYSIS
==========================================================================
LOCATION:       I-880 & STEVENS CREEK
MESSAGE:        PROJECT CONDITIONS      SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:      PM                      N-S      44.50    4.50
COUNT DATE:     10/96                   E-W      80.50    4.50
ANAL. DATE:     7/2/97
ANAL. INIT:     RD                      CYCLE LENGTH =  134
GROWTH FACTOR % :    3.0                LOST TIME    =  0.067
------------------------------------------------------------------------
LEG  PATTERN      LANE               APPROVED     PROJECT          TOTAL
                 COUNTS                TRIPS        TRIPS            TRIPS
     LSTSRO     LT   THRU    RT    LT THRU  RT   LT THRU RT     LT  THRU   RT
 N   000020      0      0   642     0    0  54    0    0 196     0     0  911
 E   003000      0   1711     0     0  161   0    0  173   0     0  2096    0
 S   000000      0      0     0     0    0   0    0    0   0     0     0    0
 W   000000      0      0     0     0    0   0    0    0   0     0     0    0
========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
              L S T S R O                              LANE    G/C
========================================================================
 N      0     0 0 0 0 0 0       0        0   0.000   0.000   0.000       0
 E      3     0 0 3 0 0 0    1711     5340   0.320   0.613   0.933    4982
 S      0     0 0 0 0 0 0       0        0   0.000   0.000   0.000       0
 W      0     0 0 0 0 0 0       0        0   0.000   0.000   0.000       0
                                       LT = 0.067
TOTALS  3                    1711            0.387                    4982
                                      1 - 0.387 = 0.613 /  3 = 0.204
                                                             V/C = 0.343
                                  EXISTING          LEVEL OF SERVICE =   A
------------------------------------------------------------------------
 N      0     0 0 0 0 0 0       0        0   0.000   0.000   0.000       0
 E      3     0 0 3 0 0 0    1923     5340   0.360   0.573   0.933    4982
 S      0     0 0 0 0 0 0       0        0   0.000   0.000   0.000       0
 W      0     0 0 0 0 0 0       0        0   0.000   0.000   0.000       0
                                       LT = 0.067
TOTALS  3                    1923            0.427                    4982
                                      1 - 0.427 = 0.573 /  3 = 0.191
                                                             V/C = 0.386
                              EXISTING + APPROVED    LEVEL OF SERVICE =   A
------------------------------------------------------------------------
 N      0     0 0 0 0 0 0       0        0   0.000   0.000   0.000       0
 E      3     0 0 3 0 0 0    2096     5340   0.393   0.540   0.933    4982
 S      0     0 0 0 0 0 0       0        0   0.000   0.000   0.000       0
 W      0     0 0 0 0 0 0       0        0   0.000   0.000   0.000       0
                                       LT = 0.067
TOTALS  3                    2096            0.460                    4982
                                      1 - 0.460 = 0.540 /  3 = 0.180
                                                             V/C = 0.421
                    EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   A
========================================================================
( 2096 - 1923 )/ 1923 =   9.00 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                        LEVEL OF SERVICE ANALYSIS
===========================================================================
LOCATION:       I-880 & STEVENS CREEK
MESSAGE:        CUMULATIVE CONDITIONS  SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:      PM                     N-S      44.50    4.50
COUNT DATE:     10/96                  E-W      80.50    4.50
ANAL. DATE:     7/2/97
ANAL. INIT:     RD                     CYCLE LENGTH =  134
GROWTH FACTOR % :    3.0               LOST TIME    =  0.067
---------------------------------------------------------------------------
LEG  PATTERN       LANE           APPROVED    PROJECT          TOTAL
                  COUNTS            TRIPS       TRIPS           TRIPS
     LSTSRO     LT  THRU   RT    LT THRU  RT   LT THRU RT    LT  THRU   RT
 N   000020      0     0  642     0    0  54    0    0 222    0     0  937
 E   003000      0  1711    0     0  161   0    0  239   0    0  2162    0
 S   000000      0     0    0     0    0   0    0    0   0    0     0    0
 W   000000      0     0    0     0    0   0    0    0   0    0     0    0
===========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C   ADJ./   ADJ.   C. CAP.
               L S T S R O                          LANE    G/C
===========================================================================
 N      0     0 0 0 0 0 0      0        0   0.000  0.000  0.000       0
 E      3     0 0 3 0 0 0   1711     5340   0.320  0.613  0.933    4982
 S      0     0 0 0 0 0 0      0        0   0.000  0.000  0.000       0
 W      0     0 0 0 0 0 0      0        0   0.000  0.000  0.000       0
                                        LT = 0.067
TOTALS  3                   1711            0.387                  4982
                                      1 - 0.387 = 0.613 /  3 = 0.204
                                                             V/C = 0.343
                             EXISTING          LEVEL OF SERVICE =   A
---------------------------------------------------------------------------
 N      0     0 0 0 0 0 0      0        0   0.000  0.000  0.000       0
 E      3     0 0 3 0 0 0   1923     5340   0.360  0.573  0.933    4982
 S      0     0 0 0 0 0 0      0        0   0.000  0.000  0.000       0
 W      0     0 0 0 0 0 0      0        0   0.000  0.000  0.000       0
                                        LT = 0.067
TOTALS  3                   1923            0.427                  4982
                                      1 - 0.427 = 0.573 /  3 = 0.191
                                                             V/C = 0.386
                         EXISTING + APPROVED   LEVEL OF SERVICE =   A
---------------------------------------------------------------------------
 N      0     0 0 0 0 0 0      0        0   0.000  0.000  0.000       0
 E      3     0 0 3 0 0 0   2162     5340   0.405  0.528  0.933    4982
 S      0     0 0 0 0 0 0      0        0   0.000  0.000  0.000       0
 W      0     0 0 0 0 0 0      0        0   0.000  0.000  0.000       0
                                        LT = 0.067
TOTALS  3                   2162            0.472                  4982
                                      1 - 0.472 = 0.528 /  3 = 0.176
                                                             V/C = 0.434
               EXISTING + APPROVED + PROJECT   LEVEL OF SERVICE =   A
===========================================================================
( 2162 - 1923 )/ 1923 =  12.43 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

```
                         LEVEL OF SERVICE ANALYSIS
==============================================================================
LOCATION:      BASCOM & MOORPARK
MESSAGE:       PROJECT CONDITIONS     SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:     AM                     N-S      54.00    6.00
COUNT DATE:    4/17/97                E-W      54.00    6.00
ANAL. DATE:    7/2/97
ANAL. INIT:    RD                     CYCLE LENGTH =  120
GROWTH FACTOR % :    0.0              LOST TIME    =  0.100
----------------------------------------------------------------------------
LEG  PATTERN      LANE           APPROVED     PROJECT          TOTAL
                 COUNTS            TRIPS       TRIPS            TRIPS
     LSTSRO    LT   THRU   RT    LT THRU  RT   LT THRU RT     LT  THRU   RT
 N   102100   425    488  186     0    8   0    0   0   0    425   496  186
 E   000000     0      0    0     0    0   0    0   0   0      0     0    0
 S   202100   367   1189  286     0   17   0    1   0   0    368  1206  286
 W   102010   145    733  246     0    0   0    0   3   0    145   736  246
============================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.    C. CAP.
              L S T S R O                             LANE     G/C
============================================================================
 N      1     1 0 0 0 0 0     425     1675   0.254  0.027   0.281      471
 E      0     0 0 0 0 0 0       0        0   0.000  0.000   0.000        0
 S      3     0 0 2 1 0 0    1475     5283   0.279  0.080   0.359     1897
 W      2     0 0 2 0 0 0     733     3560   0.206  0.054   0.260      926
                                         LT = 0.100
TOTALS  6                    2633            0.839                     3294
                                       1 - 0.839 = 0.161 /  6 = 0.027
                                                               V/C = 0.799
                                 EXISTING         LEVEL OF SERVICE =   C
----------------------------------------------------------------------------
 N      1     1 0 0 0 0 0     425     1675   0.254  0.026   0.280      469
 E      0     0 0 0 0 0 0       0        0   0.000  0.000   0.000        0
 S      3     0 0 2 1 0 0    1492     5283   0.282  0.079   0.361     1907
 W      2     0 0 2 0 0 0     733     3560   0.206  0.053   0.259      922
                                         LT = 0.100
TOTALS  6                    2650            0.842                     3298
                                       1 - 0.842 = 0.158 /  6 = 0.026
                                                               V/C = 0.804
                             EXISTING + APPROVED    LEVEL OF SERVICE =   D
----------------------------------------------------------------------------
 N      1     1 0 0 0 0 0     425     1675   0.254  0.026   0.280      469
 E      0     0 0 0 0 0 0       0        0   0.000  0.000   0.000        0
 S      3     0 0 2 1 0 0    1492     5283   0.282  0.079   0.361     1907
 W      2     0 0 2 0 0 0     736     3560   0.207  0.052   0.259      922
                                         LT = 0.100
TOTALS  6                    2653            0.843                     3298
                                       1 - 0.843 = 0.157 /  6 = 0.026
                                                               V/C = 0.804
                   EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   D
============================================================================
( 2653 - 2650 )/ 2650 =   0.11 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                              LEVEL OF SERVICE ANALYSIS
===========================================================================
LOCATION:      BASCOM & MOORPARK
MESSAGE:       CUMULATIVE CONDITIONS  SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:     AM                     N-S      54.00     6.00
COUNT DATE:    4/17/97                E-W      54.00     6.00
ANAL. DATE:    7/2/97
ANAL. INIT:    RD                     CYCLE LENGTH =  120
GROWTH FACTOR % :    0.0              LOST TIME    =  0.100
-------------------------------------------------------------------------
LEG  PATTERN      LANE           APPROVED      PROJECT          TOTAL
                 COUNTS            TRIPS        TRIPS            TRIPS
     LSTSRO    LT  THRU   RT    LT THRU  RT   LT THRU RT     LT  THRU   RT
 N   102100   425   488  186     0    8   0    0   1   0    425   497  186
 E   000000     0     0    0     0    0   0    0   0   0      0     0    0
 S   202100   367  1189  286     0   17   0    1   1   0    368  1207  286
 W   102010   145   733  246     0    0   0    0   3   0    145   736  246
=========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./   ADJ.   C. CAP.
              L S T S R O                            LANE    G/C
=========================================================================
 N      1     1 0 0 0 0 0    425     1675    0.254   0.027   0.281    471
 E      0     0 0 0 0 0 0      0        0    0.000   0.000   0.000      0
 S      3     0 0 2 1 0 0   1475     5283    0.279   0.080   0.359   1897
 W      2     0 0 2 0 0 0    733     3560    0.206   0.054   0.260    926
                                        LT = 0.100
TOTALS  6                   2633             0.839                   3294
                                       1 - 0.839 = 0.161 /  6 = 0.027
                                                           V/C = 0.799
                                 EXISTING          LEVEL OF SERVICE =  C
-------------------------------------------------------------------------
 N      1     1 0 0 0 0 0    425     1675    0.254   0.026   0.280    469
 E      0     0 0 0 0 0 0      0        0    0.000   0.000   0.000      0
 S      3     0 0 2 1 0 0   1492     5283    0.282   0.079   0.361   1907
 W      2     0 0 2 0 0 0    733     3560    0.206   0.053   0.259    922
                                        LT = 0.100
TOTALS  6                   2650             0.842                   3298
                                       1 - 0.842 = 0.158 /  6 = 0.026
                                                           V/C = 0.804
                            EXISTING + APPROVED    LEVEL OF SERVICE =  D
-------------------------------------------------------------------------
 N      1     1 0 0 0 0 0    425     1675    0.254   0.026   0.280    469
 E      0     0 0 0 0 0 0      0        0    0.000   0.000   0.000      0
 S      3     0 0 2 1 0 0   1493     5283    0.283   0.078   0.361   1907
 W      2     0 0 2 0 0 0    736     3560    0.207   0.052   0.259    922
                                        LT = 0.100
TOTALS  6                   2654             0.844                   3298
                                       1 - 0.844 = 0.156 /  6 = 0.026
                                                           V/C = 0.805
                  EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =  D
=========================================================================
( 2654 - 2650 )/ 2650 =   0.15 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                         LEVEL OF SERVICE ANALYSIS
===========================================================================
LOCATION:        BASCOM & MOORPARK
MESSAGE:         PROJECT CONDITIONS      SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:       PM                      N-S      54.00    6.00
COUNT DATE:      4/17/97                 E-W      54.00    6.00
ANAL. DATE:      7/2/97
ANAL. INIT:      RD                      CYCLE LENGTH =  120
GROWTH FACTOR % :     0.0                LOST TIME    =  0.100
-------------------------------------------------------------------------
LEG  PATTERN      LANE            APPROVED     PROJECT           TOTAL
                  COUNTS           TRIPS        TRIPS            TRIPS
     LSTSRO    LT  THRU  RT    LT THRU  RT   LT THRU RT     LT  THRU  RT
 N   102100   417  1380 386     0   17   0    0   0   0    417  1397 386
 E   000000     0     0   0     0    0   0    0   0   0      0     0   0
 S   202100   247   542 407     0    8   0    2   0   0    249   550 407
 W   102010   123   976 413     0    0   0    0   0   2    123   976 415
=========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.    G/C    ADJ./    ADJ.   C. CAP.
               L S T S R O                             LANE     G/C
=========================================================================
 N      1     1 0 0 0 0 0    417     1675     0.249   0.033   0.282    472
 E      0     0 0 0 0 0 0      0        0     0.000   0.000   0.000      0
 S      3     0 0 2 1 0 0    949     5257     0.181   0.098   0.279   1467
 W      2     0 0 2 0 0 0    976     3560     0.274   0.065   0.339   1207
                                         LT = 0.100
TOTALS  6                   2342              0.804                   3146
                                      1 - 0.804 = 0.196 /  6 = 0.033
                                                          V/C = 0.744
                                  EXISTING          LEVEL OF SERVICE =   C
-------------------------------------------------------------------------
 N      1     1 0 0 0 0 0    417     1675     0.249   0.032   0.281    471
 E      0     0 0 0 0 0 0      0        0     0.000   0.000   0.000      0
 S      3     0 0 2 1 0 0    957     5257     0.182   0.097   0.279   1467
 W      2     0 0 2 0 0 0    976     3560     0.274   0.065   0.339   1207
                                         LT = 0.100
TOTALS  6                   2350              0.805                   3145
                                      1 - 0.805 = 0.195 /  6 = 0.032
                                                          V/C = 0.747
                              EXISTING + APPROVED   LEVEL OF SERVICE =   C
-------------------------------------------------------------------------
 N      1     1 0 0 0 0 0    417     1675     0.249   0.032   0.281    471
 E      0     0 0 0 0 0 0      0        0     0.000   0.000   0.000      0
 S      3     0 0 2 1 0 0    957     5257     0.182   0.097   0.279   1467
 W      2     0 0 2 0 0 0    976     3560     0.274   0.065   0.339   1207
                                         LT = 0.100
TOTALS  6                   2350              0.805                   3145
                                      1 - 0.805 = 0.195 /  6 = 0.032
                                                          V/C = 0.747
                   EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   C
=========================================================================
( 2350 - 2350 )/ 2350 =   0.00 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                          LEVEL OF SERVICE ANALYSIS
==========================================================================
LOCATION:      BASCOM & MOORPARK
MESSAGE:       CUMULATIVE CONDTIONS   SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:     PM                     N-S      54.00    6.00
COUNT DATE:    4/17/97                E-W      54.00    6.00
ANAL. DATE:    7/2/97
ANAL. INIT:    RD                     CYCLE LENGTH =  120
GROWTH FACTOR % :    0.0              LOST TIME    =  0.100
------------------------------------------------------------------------
LEG  PATTERN       LANE           APPROVED     PROJECT          TOTAL
                  COUNTS            TRIPS        TRIPS            TRIPS
     LSTSRO     LT   THRU   RT    LT THRU  RT   LT THRU RT     LT  THRU   RT
 N   102100    417   1380  386     0   17   0    0   4   0    417  1401  386
 E   000000      0      0    0     0    0   0    0   0   0      0     0    0
 S   202100    247    542  407     0    8   0    2   4   0    249   554  407
 W   102010    123    976  413     0    0   0    0   0   2    123   976  415
========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
              L S T S R O                              LANE     G/C
========================================================================
 N      1     1 0 0 0 0 0     417     1675   0.249   0.033   0.282     472
 E      0     0 0 0 0 0 0       0        0   0.000   0.000   0.000       0
 S      3     0 0 2 1 0 0     949     5257   0.181   0.098   0.279    1467
 W      2     0 0 2 0 0 0     976     3560   0.274   0.065   0.339    1207
                                        LT = 0.100
TOTALS  6                    2342             0.804                    3146
                                   1 - 0.804 = 0.196 /  6 = 0.033
                                                            V/C = 0.744
                               EXISTING         LEVEL OF SERVICE =   C
------------------------------------------------------------------------
 N      1     1 0 0 0 0 0     417     1675   0.249   0.032   0.281     471
 E      0     0 0 0 0 0 0       0        0   0.000   0.000   0.000       0
 S      3     0 0 2 1 0 0     957     5257   0.182   0.097   0.279    1467
 W      2     0 0 2 0 0 0     976     3560   0.274   0.065   0.339    1207
                                        LT = 0.100
TOTALS  6                    2350             0.805                    3145
                                   1 - 0.805 = 0.195 /  6 = 0.032
                                                            V/C = 0.747
                          EXISTING + APPROVED   LEVEL OF SERVICE =   C
------------------------------------------------------------------------
 N      1     1 0 0 0 0 0     417     1675   0.249   0.032   0.281     471
 E      0     0 0 0 0 0 0       0        0   0.000   0.000   0.000       0
 S      3     0 0 2 1 0 0     961     5257   0.183   0.097   0.280    1472
 W      2     0 0 2 0 0 0     976     3560   0.274   0.065   0.339    1207
                                        LT = 0.100
TOTALS  6                    2354             0.806                    3150
                                   1 - 0.806 = 0.194 /  6 = 0.032
                                                            V/C = 0.747
                EXISTING + APPROVED + PROJECT   LEVEL OF SERVICE =   C
========================================================================
( 2354 - 2350 )/ 2350 =   0.17 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

```
                           LEVEL OF SERVICE ANALYSIS
=====================================================================
LOCATION:       BASCOM & NAGLEE
MESSAGE:        PROJECT CONDITIONS       SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:      AM                       N-S      110.00     6.50
COUNT DATE:     10/31/95                 E-W       90.00     6.50
ANAL. DATE:     7/2/97
ANAL. INIT:     RD                       CYCLE LENGTH =  213
GROWTH FACTOR % :    6.9                 LOST TIME    =  0.061
--------------------------------------------------------------------
LEG  PATTERN       LANE            APPROVED     PROJECT          TOTAL
                  COUNTS             TRIPS        TRIPS          TRIPS
     LSTSRO    LT   THRU   RT    LT THRU  RT    LT THRU RT     LT  THRU   RT
 N   102010    71    312  128     0    0  25     0    2  0     76   336  162
 E   102010   115    298   92     0    9   0     3    3  0    126   331   98
 S   102010   238   1689  242    21    0   0     0    1  2    275  1807  261
 W   102010   140    319   13    10    4   8     0    0  0    160   345   22
====================================================================
LEG  # LANES  CRIT. MOVE     C. VOL.  T. CAP.    G/C    ADJ./    ADJ.   C. CAP.
              L S T S R O                                LANE     G/C
====================================================================
 N      1     1 0 0 0 0 0        71     1675    0.042   0.043   0.085      142
 E      2     0 0 2 0 0 0       298     3560    0.084   0.085   0.169      602
 S      2     0 0 2 0 0 0      1689     3560    0.474   0.085   0.559     1990
 W      1     1 0 0 0 0 0       140     1675    0.084   0.043   0.127      213
                                           LT = 0.061
TOTALS  6                      2198             0.745                     2947
                                         1 - 0.745 = 0.255 /  6 = 0.043
                                                                V/C = 0.746
                                  EXISTING           LEVEL OF SERVICE =   C
--------------------------------------------------------------------
 N      1     1 0 0 0 0 0        76     1675    0.045   0.033   0.078      131
 E      2     0 0 2 0 0 0       328     3560    0.092   0.066   0.158      562
 S      2     0 0 2 0 0 0      1806     3560    0.507   0.066   0.573     2040
 W      1     1 0 0 0 0 0       160     1675    0.096   0.033   0.129      216
                                           LT = 0.061
TOTALS  6                      2370             0.801                     2949
                                         1 - 0.801 = 0.199 /  6 = 0.033
                                                                V/C = 0.804
                             EXISTING + APPROVED     LEVEL OF SERVICE =   D
--------------------------------------------------------------------
 N      1     1 0 0 0 0 0        76     1675    0.045   0.033   0.078      131
 E      2     0 0 2 0 0 0       331     3560    0.093   0.066   0.159      566
 S      2     0 0 2 0 0 0      1807     3560    0.508   0.066   0.574     2043
 W      1     1 0 0 0 0 0       160     1675    0.096   0.033   0.129      216
                                           LT = 0.061
TOTALS  6                      2374             0.803                     2956
                                         1 - 0.803 = 0.197 /  6 = 0.033
                                                                V/C = 0.803
                    EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   D
====================================================================
( 2374 - 2370 )/ 2370 =    0.17 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                       LEVEL OF SERVICE ANALYSIS
=========================================================================
LOCATION:     BASCOM & NAGLEE
MESSAGE:      CUMULATIVE CONDITIONS  SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:    AM                     N-S     110.00    6.50
COUNT DATE:   10/31/95               E-W      90.00    6.50
ANAL. DATE:   7/2/97
ANAL. INIT:   RD                     CYCLE LENGTH =  213
GROWTH FACTOR % :    6.9             LOST TIME    =  0.061
-----------------------------------------------------------------------
LEG  PATTERN      LANE          APPROVED     PROJECT          TOTAL
                 COUNTS           TRIPS       TRIPS           TRIPS
     LSTSRO    LT  THRU   RT   LT THRU  RT   LT THRU RT    LT  THRU   RT
 N   102010    71   312  128    0    0  25    0   2   1    76   336  163
 E   102010   115   298   92    0    9   0    3   6   0   126   334   98
 S   102010   238  1689  242   21    0   0    0   1   2   275  1807  261
 W   102010   140   319   13   10    4   8    0   2   0   160   347   22
=======================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./   ADJ.   C. CAP.
              L S T S R O                             LANE    G/C
=======================================================================
 N      1    1 0 0 0 0 0       71     1675   0.042   0.043   0.085    142
 E      2    0 0 2 0 0 0      298     3560   0.084   0.085   0.169    602
 S      2    0 0 2 0 0 0     1689     3560   0.474   0.085   0.559   1990
 W      1    1 0 0 0 0 0      140     1675   0.084   0.043   0.127    213
                                        LT = 0.061
TOTALS  6                    2198            0.745                   2947
                                     1 - 0.745 = 0.255 /  6 = 0.043
                                                          V/C = 0.746
                               EXISTING         LEVEL OF SERVICE =   C
-----------------------------------------------------------------------
 N      1    1 0 0 0 0 0       76     1675   0.045   0.033   0.078    131
 E      2    0 0 2 0 0 0      328     3560   0.092   0.066   0.158    562
 S      2    0 0 2 0 0 0     1806     3560   0.507   0.066   0.573   2040
 W      1    1 0 0 0 0 0      160     1675   0.096   0.033   0.129    216
                                        LT = 0.061
TOTALS  6                    2370            0.801                   2949
                                     1 - 0.801 = 0.199 /  6 = 0.033
                                                          V/C = 0.804
                          EXISTING + APPROVED   LEVEL OF SERVICE =   D
-----------------------------------------------------------------------
 N      1    1 0 0 0 0 0       76     1675   0.045   0.033   0.078    131
 E      2    0 0 2 0 0 0      334     3560   0.094   0.065   0.159    566
 S      2    0 0 2 0 0 0     1807     3560   0.508   0.065   0.573   2040
 W      1    1 0 0 0 0 0      160     1675   0.096   0.033   0.129    216
                                        LT = 0.061
TOTALS  6                    2377            0.804                   2953
                                     1 - 0.804 = 0.196 /  6 = 0.033
                                                          V/C = 0.805
               EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   D
=======================================================================
( 2377 - 2370 )/ 2370 =   0.30 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

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```
                       LEVEL OF SERVICE ANALYSIS
========================================================================
LOCATION:        BASCOM & NAGLEE
MESSAGE:         PROJECT CONDITIONS      SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:       PM                      N-S      110.00    6.50
COUNT DATE:      4/17/97                 E-W       90.00    6.50
ANAL. DATE:      7/2/97
ANAL. INIT:      RD                      CYCLE LENGTH =  213
GROWTH FACTOR % :     0.0                LOST TIME     =  0.061
----------------------------------------------------------------------
 LEG  PATTERN       LANE              APPROVED     PROJECT          TOTAL
                   COUNTS               TRIPS       TRIPS            TRIPS
      LSTSRO     LT  THRU   RT      LT THRU  RT    LT THRU RT      LT  THRU   RT
  N   102010    110  1165  134       0    0  10     0   5   0     110  1170  144
  E   102010    192   308   55       0    4   0     9   6   0     201   318   55
  S   102010    117   402  160       8    0   0     0   5   9     125   407  169
  W   102010    110   302   39      25    9  21     0   6   0     135   317   60
======================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C     ADJ./    ADJ.   C. CAP.
               L S T S R O                             LANE    G/C
======================================================================
 N       2    0 0 2 0 0 0   1165     3560    0.327   0.114   0.441    1570
 E       1    1 0 0 0 0 0    192     1675    0.115   0.057   0.172     288
 S       1    1 0 0 0 0 0    117     1675    0.070   0.057   0.127     213
 W       2    0 0 2 0 0 0    302     3560    0.085   0.114   0.199     708
                                          LT = 0.061
TOTALS   6                  1776             0.658                    2779
                                       1 - 0.658 = 0.342 /  6 = 0.057
                                                                V/C = 0.639
                              EXISTING          LEVEL OF SERVICE =   B
----------------------------------------------------------------------
 N       2    0 0 2 0 0 0   1165     3560    0.327   0.112   0.439    1563
 E       1    1 0 0 0 0 0    192     1675    0.115   0.056   0.171     286
 S       1    1 0 0 0 0 0    125     1675    0.075   0.056   0.131     219
 W       2    0 0 2 0 0 0    311     3560    0.087   0.112   0.199     708
                                          LT = 0.061
TOTALS   6                  1793             0.665                    2776
                                       1 - 0.665 = 0.335 /  6 = 0.056
                                                                V/C = 0.646
                         EXISTING + APPROVED    LEVEL OF SERVICE =   B
----------------------------------------------------------------------
 N       2    0 0 2 0 0 0   1170     3560    0.329   0.109   0.438    1559
 E       1    1 0 0 0 0 0    201     1675    0.120   0.054   0.174     291
 S       1    1 0 0 0 0 0    125     1675    0.075   0.054   0.129     216
 W       2    0 0 2 0 0 0    317     3560    0.089   0.109   0.198     705
                                          LT = 0.061
TOTALS   6                  1813             0.674                    2771
                                       1 - 0.674 = 0.326 /  6 = 0.054
                                                                V/C = 0.654
               EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   B
======================================================================
( 1813 - 1793 )/ 1793 =    1.12 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                          LEVEL OF SERVICE ANALYSIS
=========================================================================
LOCATION:         BASCOM & NAGLEE
MESSAGE:          CUMULATIVE CONDTIONS     SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:        PM                       N-S     110.00    6.50
COUNT DATE:       4/17/97                  E-W      90.00    6.50
ANAL. DATE:       7/2/97
ANAL. INIT:       RD                       CYCLE LENGTH =  213
GROWTH FACTOR % :     0.0                  LOST TIME    =  0.061
-----------------------------------------------------------------------
LEG  PATTERN       LANE            APPROVED      PROJECT          TOTAL
                  COUNTS             TRIPS        TRIPS           TRIPS
     LSTSRO     LT  THRU   RT    LT THRU  RT    LT THRU RT     LT  THRU   RT
 N   102010    110  1165  134     0    0  10     0    5  2    110  1170  146
 E   102010    192   308   55     0    4   0     9   19  0    201   331   55
 S   102010    117   402  160     8    0   0     0    5  9    125   407  169
 W   102010    110   302   39    25    9  21     2   19  0    137   330   60
=======================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./   ADJ.   C. CAP.
              L S T S R O                            LANE    G/C
=======================================================================
 N      2     0 0 2 0 0 0   1165     3560    0.327   0.114   0.441   1570
 E      1     1 0 0 0 0 0    192     1675    0.115   0.057   0.172    288
 S      1     1 0 0 0 0 0    117     1675    0.070   0.057   0.127    213
 W      2     0 0 2 0 0 0    302     3560    0.085   0.114   0.199    708
                                         LT = 0.061
TOTALS  6                   1776             0.658                   2779
                                     1 - 0.658 = 0.342 /  6 = 0.057
                                                            V/C = 0.639
                                 EXISTING          LEVEL OF SERVICE =  B
-----------------------------------------------------------------------
 N      2     0 0 2 0 0 0   1165     3560    0.327   0.112   0.439   1563
 E      1     1 0 0 0 0 0    192     1675    0.115   0.056   0.171    286
 S      1     1 0 0 0 0 0    125     1675    0.075   0.056   0.131    219
 W      2     0 0 2 0 0 0    311     3560    0.087   0.112   0.199    708
                                         LT = 0.061
TOTALS  6                   1793             0.665                   2776
                                     1 - 0.665 = 0.335 /  6 = 0.056
                                                            V/C = 0.646
                            EXISTING + APPROVED    LEVEL OF SERVICE =  B
-----------------------------------------------------------------------
 N      2     0 0 2 0 0 0   1170     3560    0.329   0.107   0.436   1552
 E      1     1 0 0 0 0 0    201     1675    0.120   0.054   0.174    291
 S      1     1 0 0 0 0 0    125     1675    0.075   0.054   0.129    216
 W      2     0 0 2 0 0 0    330     3560    0.093   0.107   0.200    712
                                         LT = 0.061
TOTALS  6                   1826             0.678                   2771
                                     1 - 0.678 = 0.322 /  6 = 0.054
                                                            V/C = 0.659
                 EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =  B
=======================================================================
( 1826 - 1793 )/ 1793 =   1.84 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
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                        LEVEL OF SERVICE ANALYSIS
=====================================================================
LOCATION:      BASCOM & SAN CARLOS
MESSAGE:       PROJECT CONDITIONS     SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:     AM                     N-S       76.00     6.50
COUNT DATE:    4/15/97                E-W       60.00     6.50
ANAL. DATE:    7/2/97
ANAL. INIT:    RD                     CYCLE LENGTH =  149
GROWTH FACTOR % :   0.0               LOST TIME    =  0.087
---------------------------------------------------------------------
LEG  PATTERN       LANE           APPROVED     PROJECT         TOTAL
                  COUNTS            TRIPS       TRIPS          TRIPS
     LSTSRO     LT  THRU   RT    LT THRU  RT   LT THRU RT     LT THRU  RT
 N   103010     84   344   22     2    6   0    0   0   6     86  350  28
 E   102010    125   791  351     0   28   7    0   3   0    125  822 358
 S   102010    277  1480  136     3   14   0    1   0   0    281 1494 136
 W   101100    125   250   76     0   10   2    4   2   1    129  262  79
=====================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
               L S T S R O                             LANE    G/C
=====================================================================
 N      1     1 0 0 0 0 0      84     1675    0.050   0.025   0.075     126
 E      2     0 0 2 0 0 0     791     3560    0.222   0.050   0.272     968
 S      2     0 0 2 0 0 0    1480     3560    0.416   0.050   0.466    1659
 W      1     1 0 0 0 0 0     125     1675    0.075   0.025   0.100     168
                                         LT = 0.087
TOTALS  6                    2480             0.850                    2921
                                     1 - 0.850 = 0.150 /  6 = 0.025
                                                            V/C = 0.849
                             EXISTING            LEVEL OF SERVICE =   D
---------------------------------------------------------------------
 N      1     1 0 0 0 0 0      86     1675    0.051   0.023   0.074     124
 E      2     0 0 2 0 0 0     819     3560    0.230   0.046   0.276     983
 S      2     0 0 2 0 0 0    1494     3560    0.420   0.046   0.466    1659
 W      1     1 0 0 0 0 0     125     1675    0.075   0.023   0.098     164
                                         LT = 0.087
TOTALS  6                    2524             0.863                    2930
                                     1 - 0.863 = 0.137 /  6 = 0.023
                                                            V/C = 0.861
                         EXISTING + APPROVED     LEVEL OF SERVICE =   D
---------------------------------------------------------------------
 N      1     1 0 0 0 0 0      86     1675    0.051   0.022   0.073     122
 E      2     0 0 2 0 0 0     822     3560    0.231   0.045   0.276     983
 S      2     0 0 2 0 0 0    1494     3560    0.420   0.045   0.465    1655
 W      1     1 0 0 0 0 0     129     1675    0.077   0.022   0.099     166
                                         LT = 0.087
TOTALS  6                    2531             0.866                    2926
                                     1 - 0.866 = 0.134 /  6 = 0.022
                                                            V/C = 0.865
                   EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   D
=====================================================================
( 2531 - 2524 )/ 2524 =   0.28 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
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97-036

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                              LEVEL OF SERVICE ANALYSIS
=============================================================================
LOCATION:       BASCOM & SAN CARLOS
MESSAGE:        CUMULATIVE CONDTIONS    SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:      AM                      N-S      76.00    6.50
COUNT DATE:     4/15/97                 E-W      60.00    6.50
ANAL. DATE:     7/2/97
ANAL. INIT:     RD                      CYCLE LENGTH =  149
GROWTH FACTOR % :     0.0               LOST TIME    =  0.087
----------------------------------------------------------------------------
LEG  PATTERN      LANE             APPROVED      PROJECT         TOTAL
                 COUNTS             TRIPS         TRIPS          TRIPS
     LSTSRO     LT   THRU   RT    LT THRU  RT   LT THRU RT    LT   THRU   RT
 N   103010     84   344    22     2   6    0    0   0   7    86   350    29
 E   102010    125   791   351     0  28    7    0   6   0   125   825   358
 S   102010    277  1480   136     3  14    0    2   0   0   282  1494   136
 W   101100    125   250 .  76     0  10    2    4   4   2   129   264    80
============================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
               L S T S R O                             LANE    G/C
============================================================================
 N      1     1 0 0 0 0 0      84     1675    0.050   0.025   0.075    126
 E      2     0 0 2 0 0 0     791     3560    0.222   0.050   0.272    968
 S      2     0 0 2 0 0 0    1480     3560    0.416   0.050   0.466   1659
 W      1     1 0 0 0 0 0     125     1675    0.075   0.025   0.100    168
                                          LT = 0.087
TOTALS  6                    2480              0.850                  2921
                                       1 - 0.850 = 0.150 /  6 = 0.025
                                                              V/C = 0.849
                                 EXISTING          LEVEL OF SERVICE =   D
----------------------------------------------------------------------------
 N      1     1 0 0 0 0 0      86     1675    0.051   0.023   0.074    124
 E      2     0 0 2 0 0 0     819     3560    0.230   0.046   0.276    983
 S      2     0 0 2 0 0 0    1494     3560    0.420   0.046   0.466   1659
 W      1     1 0 0 0 0 0     125     1675    0.075   0.023   0.098    164
                                          LT = 0.087
TOTALS  6                    2524              0.863                  2930
                                       1 - 0.863 = 0.137 /  6 = 0.023
                                                              V/C = 0.861
                             EXISTING + APPROVED   LEVEL OF SERVICE =   D
----------------------------------------------------------------------------
 N      1     1 0 0 0 0 0      86     1675    0.051   0.022   0.073    122
 E      2     0 0 2 0 0 0     825     3560    0.232   0.044   0.276    983
 S      2     0 0 2 0 0 0    1494     3560    0.420   0.044   0.464   1652
 W      1     1 0 0 0 0 0     129     1675    0.077   0.022   0.099    166
                                          LT = 0.087
TOTALS  6                    2534              0.867                  2923
                                       1 - 0.867 = 0.133 /  6 = 0.022
                                                              V/C = 0.867
                    EXISTING + APPROVED + PROJECT   LEVEL OF SERVICE =   D
============================================================================
( 2534 - 2524 )/ 2524 =   0.40 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
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97-036

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                              LEVEL OF SERVICE ANALYSIS
==============================================================================
LOCATION:       BASCOM & SAN CARLOS
MESSAGE:        PROJECT CONDITIONS      SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:      PM                      N-S      76.00    6.50
COUNT DATE:     4/15/97                 E-W      60.00    6.50
ANAL. DATE:     7/2/97
ANAL. INIT:     RD                      CYCLE LENGTH =  149
GROWTH FACTOR % :    0.0                LOST TIME    =  0.087
---------------------------------------------------------------------------
LEG  PATTERN      LANE            APPROVED      PROJECT           TOTAL
                  COUNTS            TRIPS        TRIPS             TRIPS
     LSTSRO     LT  THRU   RT     LT THRU  RT    LT THRU RT     LT  THRU   RT
 N   103010    272  1221   71      7   14  11     0   0  19    279  1235  101
 E   102010    234   502   58      0   35   2     0   9   0    234   546   60
 S   102010    162   480  191     25    6   0     5   0   0    192   486  191
 W   101100     94   708  213     10   48  24    19   9   5    123   765  242
===========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./   ADJ.   C. CAP.
               L S T S R O                           LANE    G/C
===========================================================================
 N      3     0 0 3 0 0 0    1221     5340   0.229   0.079  0.308    1645
 E      1     1 0 0 0 0 0     234     1675   0.140   0.026  0.166     278
 S      1     1 0 0 0 0 0     162     1675   0.097   0.026  0.123     206
 W      2     0 0 1 1 0 0     921     3515   0.262   0.053  0.315    1107
                                        LT = 0.087
TOTALS  7                    2538            0.815                   3236
                                     1 - 0.815 = 0.185 /  7 = 0.026
                                                             V/C = 0.784
                               EXISTING           LEVEL OF SERVICE =   C
---------------------------------------------------------------------------
 N      3     0 0 3 0 0 0    1235     5340   0.231   0.063  0.294    1570
 E      1     1 0 0 0 0 0     234     1675   0.140   0.021  0.161     270
 S      1     1 0 0 0 0 0     187     1675   0.112   0.021  0.133     223
 W      2     0 0 1 1 0 0     993     3514   0.283   0.042  0.325    1142
                                        LT = 0.087
TOTALS  7                    2649            0.853                   3205
                                     1 - 0.853 = 0.147 /  7 = 0.021
                                                             V/C = 0.827
                           EXISTING + APPROVED    LEVEL OF SERVICE =   D
---------------------------------------------------------------------------
 N      3     0 0 3 0 0 0    1235     5340   0.231   0.060  0.291    1554
 E      1     1 0 0 0 0 0     234     1675   0.140   0.020  0.160     268
 S      1     1 0 0 0 0 0     192     1675   0.115   0.020  0.135     226
 W      2     0 0 1 1 0 0    1007     3514   0.287   0.040  0.327    1149
                                        LT = 0.087
TOTALS  7                    2668            0.860                   3197
                                     1 - 0.860 = 0.140 /  7 = 0.020
                                                             V/C = 0.835
                    EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   D
===========================================================================
( 2668 - 2649 )/ 2649 =   0.72 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
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```
                          LEVEL OF SERVICE ANALYSIS
===========================================================================
LOCATION:       BASCOM & SAN CARLOS
MESSAGE:        CUMULATIVE CONDITIONS  SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:      PM                     N-S      76.00     6.50
COUNT DATE:     4/15/97                E-W      60.00     6.50
ANAL. DATE:     7/2/97
ANAL. INIT:     RD                     CYCLE LENGTH =  149
GROWTH FACTOR % :    0.0               LOST TIME    =  0.087
-------------------------------------------------------------------------
LEG  PATTERN      LANE              APPROVED     PROJECT          TOTAL
                 COUNTS               TRIPS        TRIPS           TRIPS
     LSTSRO    LT   THRU   RT     LT THRU  RT   LT THRU RT     LT  THRU   RT
 N   103010   272   1221   71      7   14  11    0    0 21    279  1235  103
 E   102010   234    502   58      0   35   2    0   20  0    234   557   60
 S   102010   162    480  191     25    6   0    9    0  0    196   486  191
 W   101100    94    708  213     10   48  24   21   20  9    125   776  246
=========================================================================
LEG  # LANES  CRIT. MOVE    C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
              L S T S R O                              LANE     G/C
=========================================================================
 N      3     0 0 3 0 0 0     1221     5340   0.229   0.079   0.308    1645
 E      1     1 0 0 0 0 0      234     1675   0.140   0.026   0.166     278
 S      1     1 0 0 0 0 0      162     1675   0.097   0.026   0.123     206
 W      2     0 0 1 1 0 0      921     3515   0.262   0.053   0.315    1107
                                            LT = 0.087
TOTALS  7                     2538            0.815                    3236
                                         1 - 0.815 = 0.185 /  7 = 0.026
                                                             V/C = 0.784
                                 EXISTING           LEVEL OF SERVICE =   C
-------------------------------------------------------------------------
 N      3     0 0 3 0 0 0     1235     5340   0.231   0.063   0.294    1570
 E      1     1 0 0 0 0 0      234     1675   0.140   0.021   0.161     270
 S      1     1 0 0 0 0 0      187     1675   0.112   0.021   0.133     223
 W      2     0 0 1 1 0 0      993     3514   0.283   0.042   0.325    1142
                                            LT = 0.087
TOTALS  7                     2649            0.853                    3205
                                         1 - 0.853 = 0.147 /  7 = 0.021
                                                             V/C = 0.827
                            EXISTING + APPROVED     LEVEL OF SERVICE =   D
-------------------------------------------------------------------------
 N      3     0 0 3 0 0 0     1235     5340   0.231   0.057   0.288    1538
 E      1     1 0 0 0 0 0      234     1675   0.140   0.019   0.159     266
 S      1     1 0 0 0 0 0      196     1675   0.117   0.019   0.136     228
 W      2     0 0 1 1 0 0     1022     3514   0.291   0.038   0.329    1156
                                            LT = 0.087
TOTALS  7                     2687            0.866                    3188
                                         1 - 0.866 = 0.134 /  7 = 0.019
                                                             V/C = 0.843
                 EXISTING + APPROVED + PROJECT     LEVEL OF SERVICE =   D
=========================================================================
( 2687 - 2649 )/ 2649 =   1.43 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 8A
```

97-036

```
                              LEVEL OF SERVICE ANALYSIS
=============================================================================
LOCATION:        BELLROSE & STEVENS CREEK
MESSAGE:         PROJECT CONDITIONS      SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:       AM                      N-S       40.00     8.00
COUNT DATE:      6/23/95                 E-W       40.00     4.50
ANAL. DATE:      7/2/97
ANAL. INIT:      RD                      CYCLE LENGTH =  92.5
GROWTH FACTOR % :     7.8                LOST TIME    =  0.135
----------------------------------------------------------------------------
LEG  PATTERN       LANE            APPROVED      PROJECT          TOTAL
                  COUNTS             TRIPS         TRIPS           TRIPS
     LSTSRO     LT   THRU   RT     LT THRU  RT    LT THRU  RT     LT  THRU   RT
N    010010     20     13   30      2    0   0     0    0   1     24    14   33
E    101100      6    596   20      0   20  11     0   10   0      6   672   33
S    010010    155     60   28      0    0   0     0    0   0    167    65   30
W    101100     29    393   22      0   13   0     0    7   0     31   444   24
=============================================================================
LEG  # LANES   CRIT. MOVE    C. VOL.   T. CAP.    G/C     ADJ./    ADJ.    C. CAP.
                L S T S R O                                LANE     G/C
=============================================================================
N        1     0 1 0 0 0 0        33      1716     0.019   0.106   0.125      215
E        2     0 0 1 1 0 0       616      3552     0.173   0.212   0.385     1368
S        1     0 1 0 0 0 0       215      1704     0.126   0.106   0.232      395
W        1     1 0 0 0 0 0        29      1675     0.017   0.106   0.123      206
                                             LT = 0.135
TOTALS   5                       893               0.470                     2184
                                         1 - 0.470 = 0.530 /  5 = 0.106
                                                                 V/C = 0.409
                                 EXISTING            LEVEL OF SERVICE =    A
-----------------------------------------------------------------------------
N        1     0 1 0 0 0 0        38      1714     0.022   0.098   0.120      206
E        2     0 0 1 1 0 0       695      3548     0.196   0.197   0.393     1394
S        1     0 1 0 0 0 0       232      1704     0.136   0.098   0.234      399
W        1     1 0 0 0 0 0        31      1675     0.019   0.098   0.117      196
                                             LT = 0.135
TOTALS   5                       996               0.508                     2195
                                         1 - 0.508 = 0.492 /  5 = 0.098
                                                                 V/C = 0.454
                             EXISTING + APPROVED     LEVEL OF SERVICE =    A
-----------------------------------------------------------------------------
N        1     0 1 0 0 0 0        38      1714     0.022   0.098   0.120      206
E        2     0 0 1 1 0 0       705      3549     0.199   0.196   0.395     1402
S        1     0 1 0 0 0 0       232      1704     0.136   0.098   0.234      399
W        1     1 0 0 0 0 0        31      1675     0.019   0.098   0.117      196
                                             LT = 0.135
TOTALS   5                      1006               0.511                     2203
                                         1 - 0.511 = 0.489 /  5 = 0.098
                                                                 V/C = 0.457
                  EXISTING + APPROVED + PROJECT      LEVEL OF SERVICE =    A
=============================================================================
( 1006 -  996 )/  996 =   1.00 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                              LEVEL OF SERVICE ANALYSIS
==============================================================================
LOCATION:      BELLROSE & STEVENS CREEK
MESSAGE:       CUMULATIVE CONDTIONS    SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:     AM                      N-S      40.00    8.00
COUNT DATE:    6/23/95                 E-W      40.00    4.50
ANAL. DATE:    7/2/97
ANAL. INIT:    RD                      CYCLE LENGTH =  92.5
GROWTH FACTOR % :    7.8               LOST TIME    =  0.135
-----------------------------------------------------------------------------
LEG  PATTERN      LANE            APPROVED      PROJECT          TOTAL
                 COUNTS             TRIPS        TRIPS            TRIPS
     LSTSRO    LT  THRU   RT     LT THRU  RT    LT THRU RT     LT  THRU   RT
 N   010010    20    13   30      2   0    0     0   0   1     24    14   33
 E   101100     6   596   20      0  20   11     0  15   0      6   677   33
 S   010010   155    60   28      0   0    0     0   0   0    167    65   30
 W   101100    29   393   22      0  13    0     0  10   0     31   447   24
=============================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
              L S T S R O                            LANE     G/C
=============================================================================
 N      1     0 1 0 0 0 0     33     1716    0.019   0.106   0.125     215
 E      2     0 0 1 1 0 0    616     3552    0.173   0.212   0.385    1368
 S      1     0 1 0 0 0 0    215     1704    0.126   0.106   0.232     395
 W      1     1 0 0 0 0 0     29     1675    0.017   0.106   0.123     206
                                         LT = 0.135
TOTALS  5                    893                 0.470                2184
                                     1 - 0.470 = 0.530 /  5 = 0.106
                                                            V/C = 0.409
                                EXISTING          LEVEL OF SERVICE =   A
-----------------------------------------------------------------------------
 N      1     0 1 0 0 0 0     38     1714    0.022   0.098   0.120     206
 E      2     0 0 1 1 0 0    695     3548    0.196   0.197   0.393    1394
 S      1     0 1 0 0 0 0    232     1704    0.136   0.098   0.234     399
 W      1     1 0 0 0 0 0     31     1675    0.019   0.098   0.117     196
                                         LT = 0.135
TOTALS  5                    996                 0.508                2195
                                     1 - 0.508 = 0.492 /  5 = 0.098
                                                            V/C = 0.454
                           EXISTING + APPROVED    LEVEL OF SERVICE =   A
-----------------------------------------------------------------------------
 N      1     0 1 0 0 0 0     38     1714    0.022   0.098   0.120     206
 E      2     0 0 1 1 0 0    710     3549    0.200   0.195   0.395    1402
 S      1     0 1 0 0 0 0    232     1704    0.136   0.098   0.234     399
 W      1     1 0 0 0 0 0     31     1675    0.019   0.098   0.117     196
                                         LT = 0.135
TOTALS  5                   1011                 0.512                2203
                                     1 - 0.512 = 0.488 /  5 = 0.098
                                                            V/C = 0.459
                EXISTING + APPROVED + PROJECT     LEVEL OF SERVICE =   A
=============================================================================
( 1011 -  996 )/  996 =   1.51 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                              LEVEL OF SERVICE ANALYSIS
========================================================================
LOCATION:        BELLROSE & STEVENS CREEK
MESSAGE:         PROJECT CONDITIONS       SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:       PM                       N-S      40.00    8.00
COUNT DATE:      4/17/97                  E-W      40.00    4.50
ANAL. DATE:      7/2/97
ANAL. INIT:      RD                       CYCLE LENGTH =  92.5
GROWTH FACTOR % :    0.0                  LOST TIME    =  0.135
----------------------------------------------------------------------
LEG  PATTERN       LANE               APPROVED     PROJECT          TOTAL
                  COUNTS                TRIPS        TRIPS           TRIPS
     LSTSRO     LT   THRU    RT     LT THRU   RT    LT THRU RT     LT  THRU   RT
 N   010010     74    140    63     11    0    0     0   0   2     85   140   65
 E   101100     44    709    13      0   68    2     0  33   0     44   810   15
 S   010010     68     30    27      0    0    0     0   0   0     68    30   27
 W   101100     28    960    45      0   71    0     2  33   0     30  1064   45
======================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.    G/C    ADJ./   ADJ.   C. CAP.
              L S T S R O                              LANE    G/C
======================================================================
 N      1     0 1 0 0 0 0     214     1744    0.123   0.075   0.198     345
 E      1     1 0 0 0 0 0      44     1675    0.026   0.075   0.101     169
 S      1     0 1 0 0 0 0      98     1707    0.057   0.075   0.132     225
 W      2     0 0 1 1 0 0    1005     3549    0.283   0.150   0.433    1537
                                         LT = 0.135
TOTALS  5                    1361                 0.624                  2276
                                          1 - 0.624 = 0.376 /  5 = 0.075
                                                                V/C = 0.598
                                 EXISTING           LEVEL OF SERVICE =   A
----------------------------------------------------------------------
 N      1     0 1 0 0 0 0     225     1740    0.129   0.070   0.199     346
 E      1     1 0 0 0 0 0      44     1675    0.026   0.070   0.096     161
 S      1     0 1 0 0 0 0      98     1707    0.057   0.070   0.127     217
 W      2     0 0 1 1 0 0    1076     3550    0.303   0.140   0.443    1573
                                         LT = 0.135
TOTALS  5                    1443                 0.650                  2297
                                          1 - 0.650 = 0.350 /  5 = 0.070
                                                                V/C = 0.628
                             EXISTING + APPROVED    LEVEL OF SERVICE =   B
----------------------------------------------------------------------
 N      1     0 1 0 0 0 0     225     1740    0.129   0.068   0.197     343
 E      1     1 0 0 0 0 0      44     1675    0.026   0.068   0.094     157
 S      1     0 1 0 0 0 0      98     1707    0.057   0.068   0.125     213
 W      2     0 0 1 1 0 0    1109     3550    0.312   0.136   0.448    1590
                                         LT = 0.135
TOTALS  5                    1476                 0.659                  2303
                                          1 - 0.659 = 0.341 /  5 = 0.068
                                                                V/C = 0.641
                   EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   B
======================================================================
( 1476 - 1443 )/ 1443 =    2.29 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                     LEVEL OF SERVICE ANALYSIS
==========================================================================
LOCATION:      BELLROSE & STEVENS CREEK
MESSAGE:       CUMULATIVE CONDITIONS  SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:     PM                     N-S       40.00    8.00
COUNT DATE:    4/17/97                E-W       40.00    4.50
ANAL. DATE:    7/2/97
ANAL. INIT:    RD                     CYCLE LENGTH =  92.5
GROWTH FACTOR % :    0.0              LOST TIME    =  0.135
------------------------------------------------------------------------
LEG  PATTERN       LANE          APPROVED      PROJECT          TOTAL
                  COUNTS           TRIPS        TRIPS           TRIPS
     LSTSRO     LT   THRU   RT    LT THRU  RT   LT THRU RT     LT  THRU   RT
N    010010     74   140    63    11    0   0    0   0   2     85   140   65
E    101100     44   709    13     0   68   2    0  50   0     44   827   15
S    010010     68    30    27     0    0   0    0   0   0     68    30   27
W    101100     28   960    45     0   71   0    2  50   0     30  1081   45
========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C     ADJ./    ADJ.    C. CAP.
              L S T S R O                             LANE     G/C
========================================================================
N       1     0 1 0 0 0 0    214     1744    0.123   0.075   0.198     345
E       1     1 0 0 0 0 0     44     1675    0.026   0.075   0.101     169
S       1     0 1 0 0 0 0     98     1707    0.057   0.075   0.132     225
W       2     0 0 1 1 0 0   1005     3549    0.283   0.150   0.433    1537
                                          LT = 0.135
TOTALS  5                   1361             0.624                    2276
                                       1 - 0.624 = 0.376 /  5 = 0.075
                                                             V/C = 0.598
                                 EXISTING         LEVEL OF SERVICE =   A
-------------------------------------------------------------------------
N       1     0 1 0 0 0 0    225     1740    0.129   0.070   0.199     346
E       1     1 0 0 0 0 0     44     1675    0.026   0.070   0.096     161
S       1     0 1 0 0 0 0     98     1707    0.057   0.070   0.127     217
W       2     0 0 1 1 0 0   1076     3550    0.303   0.140   0.443    1573
                                          LT = 0.135
TOTALS  5                   1443             0.650                    2297
                                       1 - 0.650 = 0.350 /  5 = 0.070
                                                             V/C = 0.628
                             EXISTING + APPROVED    LEVEL OF SERVICE =   B
-------------------------------------------------------------------------
N       1     0 1 0 0 0 0    225     1740    0.129   0.067   0.196     341
E       1     1 0 0 0 0 0     44     1675    0.026   0.067   0.093     156
S       1     0 1 0 0 0 0     98     1707    0.057   0.067   0.124     212
W       2     0 0 1 1 0 0   1126     3550    0.317   0.134   0.451    1601
                                          LT = 0.135
TOTALS  5                   1493             0.664                    2310
                                       1 - 0.664 = 0.336 /  5 = 0.067
                                                             V/C = 0.646
                     EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   B
=========================================================================
( 1493 - 1443 )/ 1443 =   3.47 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                          LEVEL OF SERVICE ANALYSIS
=============================================================================
LOCATION:        WINCHESTER & HAMILTON
MESSAGE:         PROJECT CONDITIONS     SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:       AM                     N-S      45.00     5.00
COUNT DATE:      4/17/97                E-W      45.00     5.00
ANAL. DATE:      7/2/97
ANAL. INIT:      RD                     CYCLE LENGTH =  100
GROWTH FACTOR % :     0.0               LOST TIME    =  0.100
.............................................................................
LEG  PATTERN       LANE            APPROVED       PROJECT           TOTAL
                  COUNTS             TRIPS          TRIPS            TRIPS
     LSTSRO     LT  THRU   RT     LT THRU  RT     LT THRU RT      LT  THRU  RT
 N   202010    358   315   87      0    0   0      0    0  0     358   315   87
 E   203010    301  1112  556      0    0   0      0    0  0     301  1112  556
 S   102010    119  1026  454      0    0   0      0    1  0     119  1027  454
 W   203010    146   648   64      0    0   0      0    0  0     146   648   64
=============================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
              L S T S R O                            LANE     G/C
=============================================================================
 N       2    2 0 0 0 0 0     358     3015    0.119   0.053   0.172     519
 E       3    0 0 3 0 0 0    1112     5340    0.208   0.079   0.287    1533
 S       2    0 0 2 0 0 0    1026     3560    0.288   0.053   0.341    1214
 W       2    2 0 0 0 0 0     146     3015    0.048   0.053   0.101     305
                                         LT = 0.100
TOTALS   9                   2642             0.763                    3571
                                      1 - 0.763 = 0.237 /  9 = 0.026
                                                               V/C = 0.740
                                 EXISTING          LEVEL OF SERVICE =   C
-----------------------------------------------------------------------------
 N       2    2 0 0 0 0 0     358     3015    0.119   0.053   0.172     519
 E       3    0 0 3 0 0 0    1112     5340    0.208   0.079   0.287    1533
 S       2    0 0 2 0 0 0    1026     3560    0.288   0.053   0.341    1214
 W       2    2 0 0 0 0 0     146     3015    0.048   0.053   0.101     305
                                         LT = 0.100
TOTALS   9                   2642             0.763                    3571
                                      1 - 0.763 = 0.237 /  9 = 0.026
                                                               V/C = 0.740
                              EXISTING + APPROVED    LEVEL OF SERVICE =   C
-----------------------------------------------------------------------------
 N       2    2 0 0 0 0 0     358     3015    0.119   0.053   0.172     519
 E       3    0 0 3 0 0 0    1112     5340    0.208   0.079   0.287    1533
 S       2    0 0 2 0 0 0    1027     3560    0.288   0.053   0.341    1214
 W       2    2 0 0 0 0 0     146     3015    0.048   0.053   0.101     305
                                         LT = 0.100
TOTALS   9                   2643             0.763                    3571
                                      1 - 0.763 = 0.237 /  9 = 0.026
                                                               V/C = 0.740
                   EXISTING + APPROVED + PROJECT     LEVEL OF SERVICE =   C
=============================================================================
( 2643 - 2642 )/ 2642 =   0.04 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                             LEVEL OF SERVICE ANALYSIS
==========================================================================
LOCATION:      WINCHESTER & HAMILTON
MESSAGE:       CUMULATIVE CONDITIONS  SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:     AM                     N-S      45.00     5.00
COUNT DATE:    4/17/97                E-W      45.00     5.00
ANAL. DATE:    7/2/97
ANAL. INIT:    RD                     CYCLE LENGTH =  100
GROWTH FACTOR % :    0.0              LOST TIME     =  0.100
------------------------------------------------------------------------
LEG  PATTERN     LANE            APPROVED      PROJECT           TOTAL
                COUNTS             TRIPS         TRIPS            TRIPS
     LSTSRO    LT  THRU   RT   LT THRU  RT   LT THRU RT     LT  THRU   RT
 N   202010   358   315   87    0    0   0    0    0  0    358   315   87
 E   203010   301  1112  556    0    0   0    0    0  0    301  1112  556
 S   102010   119  1026  454    0    0   0    0    2  0    119  1028  454
 W   203010   146   648   64    0    0   0    0    0  0    146   648   64
========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C   ADJ./   ADJ.   C. CAP.
              L S T S R O                           LANE    G/C
========================================================================
 N      2     2 0 0 0 0 0    358     3015   0.119  0.053  0.172     519
 E      3     0 0 3 0 0 0   1112     5340   0.208  0.079  0.287    1533
 S      2     0 0 2 0 0 0   1026     3560   0.288  0.053  0.341    1214
 W      2     2 0 0 0 0 0    146     3015   0.048  0.053  0.101     305
                                          LT = 0.100
TOTALS  9                   2642            0.763                  3571
                                       1 - 0.763 = 0.237 /  9 = 0.026
                                                             V/C = 0.740
                                 EXISTING          LEVEL OF SERVICE =   C
------------------------------------------------------------------------
 N      2     2 0 0 0 0 0    358     3015   0.119  0.053  0.172     519
 E      3     0 0 3 0 0 0   1112     5340   0.208  0.079  0.287    1533
 S      2     0 0 2 0 0 0   1026     3560   0.288  0.053  0.341    1214
 W      2     2 0 0 0 0 0    146     3015   0.048  0.053  0.101     305
                                          LT = 0.100
TOTALS  9                   2642            0.763                  3571
                                       1 - 0.763 = 0.237 /  9 = 0.026
                                                             V/C = 0.740
                             EXISTING + APPROVED    LEVEL OF SERVICE =   C
------------------------------------------------------------------------
 N      2     2 0 0 0 0 0    358     3015   0.119  0.052  0.171     516
 E      3     0 0 3 0 0 0   1112     5340   0.208  0.079  0.287    1533
 S      2     0 0 2 0 0 0   1028     3560   0.289  0.052  0.341    1214
 W      2     2 0 0 0 0 0    146     3015   0.048  0.052  0.100     302
                                          LT = 0.100
TOTALS  9                   2644            0.764                  3565
                                       1 - 0.764 = 0.236 /  9 = 0.026
                                                             V/C = 0.742
                    EXISTING + APPROVED + PROJECT   LEVEL OF SERVICE =   C
========================================================================
( 2644 - 2642 )/ 2642 =   0.08 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
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                         LEVEL OF SERVICE ANALYSIS
==========================================================================
LOCATION:      WINCHESTER & HAMILTON
MESSAGE:       PROJECT CONDITIONS       SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:     PM                       N-S      45.00    5.00
COUNT DATE:    4/17/97                  E-W      45.00    5.00
ANAL. DATE:    7/2/97
ANAL. INIT:    RD                       CYCLE LENGTH =  100
GROWTH FACTOR % :    0.0                LOST TIME    =  0.100
------------------------------------------------------------------------
LEG  PATTERN     LANE           APPROVED     PROJECT           TOTAL
                COUNTS            TRIPS        TRIPS             TRIPS
     LSTSRO    LT  THRU   RT    LT THRU  RT   LT THRU RT     LT  THRU   RT
 N   202010   601   797  130     0    0   0    0   2   0    601   799  130
 E   203010   398  1646  692     0    0   0    0   0   0    398  1646  692
 S   102010   170   869  437     0    0   0    0   2   0    170   871  437
 W   203010   201  1092   83     0    0   0    0   0   0    201  1092   83
========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
               L S T S R O                            LANE     G/C
========================================================================
 N     2     2 0 0 0 0 0     601     3015    0.199   0.018   0.217     654
 E     3     0 0 3 0 0 0    1646     5340    0.308   0.027   0.335    1789
 S     2     0 0 2 0 0 0     869     3560    0.244   0.018   0.262     933
 W     2     2 0 0 0 0 0     201     3015    0.067   0.018   0.085     256
                                          LT = 0.100
TOTALS  9                   3317              0.918                   3632
                                       1 - 0.918 = 0.082 /  9 = 0.009
                                                               V/C = 0.913
                                EXISTING          LEVEL OF SERVICE =    E
------------------------------------------------------------------------
 N     2     2 0 0 0 0 0     601     3015    0.199   0.018   0.217     654
 E     3     0 0 3 0 0 0    1646     5340    0.308   0.027   0.335    1789
 S     2     0 0 2 0 0 0     869     3560    0.244   0.018   0.262     933
 W     2     2 0 0 0 0 0     201     3015    0.067   0.018   0.085     256
                                          LT = 0.100
TOTALS  9                   3317              0.918                   3632
                                       1 - 0.918 = 0.082 /  9 = 0.009
                                                               V/C = 0.913
                          EXISTING + APPROVED     LEVEL OF SERVICE =    E
------------------------------------------------------------------------
 N     2     2 0 0 0 0 0     601     3015    0.199   0.018   0.217     654
 E     3     0 0 3 0 0 0    1646     5340    0.308   0.027   0.335    1789
 S     2     0 0 2 0 0 0     871     3560    0.245   0.018   0.263     936
 W     2     2 0 0 0 0 0     201     3015    0.067   0.018   0.085     256
                                          LT = 0.100
TOTALS  9                   3319              0.919                   3635
                                       1 - 0.919 = 0.081 /  9 = 0.009
                                                               V/C = 0.913
                EXISTING + APPROVED + PROJECT     LEVEL OF SERVICE =    E
========================================================================
( 3319 - 3317 )/ 3317 =    0.06 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                         LEVEL OF SERVICE ANALYSIS
=====================================================================
LOCATION:      WINCHESTER & HAMILTON
MESSAGE:       CUMULATIVE CONDITIONS  SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:     PM                     N-S      45.00    5.00
COUNT DATE:    4/17/97                E-W      45.00    5.00
ANAL. DATE:    7/2/97
ANAL. INIT:    RD                     CYCLE LENGTH =  100
GROWTH FACTOR % :    0.0              LOST TIME    =  0.100
---------------------------------------------------------------------
LEG  PATTERN      LANE           APPROVED      PROJECT          TOTAL
                 COUNTS            TRIPS         TRIPS            TRIPS
     LSTSRO    LT  THRU   RT    LT THRU  RT   LT THRU RT    LT  THRU   RT
 N   202010   601   797  130     0    0   0    0   4   0   601   801  130
 E   203010   398  1646  692     0    0   0    0   0   0   398  1646  692
 S   102010   170   869  437     0    0   0    0   4   0   170   873  437
 W   203010   201  1092   83     0    0   0    0   0   0   201  1092   83
=====================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./   ADJ.   C. CAP.
              L S T S R O                             LANE    G/C
=====================================================================
 N      2    2 0 0 0 0 0     601     3015    0.199   0.018   0.217    654
 E      3    0 0 3 0 0 0    1646     5340    0.308   0.027   0.335   1789
 S      2    0 0 2 0 0 0     869     3560    0.244   0.018   0.262    933
 W      2    2 0 0 0 0 0     201     3015    0.067   0.018   0.085    256
                                          LT = 0.100
TOTALS  9                   3317             0.918                   3632
                                       1 - 0.918 = 0.082 /  9 = 0.009
                                                           V/C = 0.913
                                  EXISTING         LEVEL OF SERVICE =  E
---------------------------------------------------------------------
 N      2    2 0 0 0 0 0     601     3015    0.199   0.018   0.217    654
 E      3    0 0 3 0 0 0    1646     5340    0.308   0.027   0.335   1789
 S      2    0 0 2 0 0 0     869     3560    0.244   0.018   0.262    933
 W      2    2 0 0 0 0 0     201     3015    0.067   0.018   0.085    256
                                          LT = 0.100
TOTALS  9                   3317             0.918                   3632
                                       1 - 0.918 = 0.082 /  9 = 0.009
                                                           V/C = 0.913
                              EXISTING + APPROVED    LEVEL OF SERVICE =  E
---------------------------------------------------------------------
 N      2    2 0 0 0 0 0     601     3015    0.199   0.018   0.217    654
 E      3    0 0 3 0 0 0    1646     5340    0.308   0.027   0.335   1789
 S      2    0 0 2 0 0 0     873     3560    0.245   0.018   0.263    936
 W      2    2 0 0 0 0 0     201     3015    0.067   0.018   0.085    256
                                          LT = 0.100
TOTALS  9                   3321             0.919                   3635
                                       1 - 0.919 = 0.081 /  9 = 0.009
                                                           V/C = 0.914
                 EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =  E
=====================================================================
( 3321 - 3317 )/ 3317 =   0.12 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

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```
                          LEVEL OF SERVICE ANALYSIS
=========================================================================
LOCATION:        MONROE & HEDDING
MESSAGE:         PROJECT CONDITIONS     SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:       AM                     N-S      45.00    5.00
COUNT DATE:      4/17/97                E-W      45.00    5.00
ANAL. DATE:      7/2/97
ANAL. INIT:      RD                     CYCLE LENGTH =  100
GROWTH FACTOR % :    0.0                LOST TIME    =  0.100
-----------------------------------------------------------------------
LEG  PATTERN      LANE            APPROVED     PROJECT          TOTAL
                 COUNTS            TRIPS        TRIPS           TRIPS
     LSTSRO     LT  THRU   RT   LT THRU  RT   LT THRU RT    LT  THRU  RT
 N   101100     57   129   27    0    0   0    0   0   4    57   129  31
 E   011010     14   253   61    0    0   0    0   1   0    14   254  61
 S   101010     34   280   20    0    0   0    0   0   0    34   280  20
 W   011010     32   616   57    0    0   6    2   0   0    34   616  63
=======================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./   ADJ.   C. CAP.
               L S T S R O                            LANE   G/C
=======================================================================
 N      1     1 0 0 0 0 0      57     1675    0.034  0.075  0.109     183
 E      2     0 1 1 0 0 0     267     3546    0.075  0.150  0.225     798
 S      1     0 0 1 0 0 0     280     1780    0.157  0.075  0.232     413
 W      2     0 1 1 0 0 0     648     3546    0.183  0.150  0.333    1181
                                         LT = 0.100
TOTALS  6                    1252             0.549                  2575
                                     1 - 0.549 = 0.451 /  6 = 0.075
                                                            V/C = 0.486
                                 EXISTING         LEVEL OF SERVICE =   A
-----------------------------------------------------------------------
 N      1     1 0 0 0 0 0      57     1675    0.034  0.075  0.109     183
 E      2     0 1 1 0 0 0     267     3546    0.075  0.150  0.225     798
 S      1     0 0 1 0 0 0     280     1780    0.157  0.075  0.232     413
 W      2     0 1 1 0 0 0     648     3546    0.183  0.150  0.333    1181
                                         LT = 0.100
TOTALS  6                    1252             0.549                  2575
                                     1 - 0.549 = 0.451 /  6 = 0.075
                                                            V/C = 0.486
                         EXISTING + APPROVED      LEVEL OF SERVICE =   A
-----------------------------------------------------------------------
 N      1     1 0 0 0 0 0      57     1675    0.034  0.075  0.109     183
 E      2     0 1 1 0 0 0     268     3546    0.076  0.150  0.226     801
 S      1     0 0 1 0 0 0     280     1780    0.157  0.075  0.232     413
 W      2     0 1 1 0 0 0     650     3546    0.183  0.150  0.333    1181
                                         LT = 0.100
TOTALS  6                    1255             0.550                  2578
                                     1 - 0.550 = 0.450 /  6 = 0.075
                                                            V/C = 0.487
                 EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   A
=======================================================================
( 1255 - 1252 )/ 1252 =   0.24 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                          LEVEL OF SERVICE ANALYSIS
==========================================================================
LOCATION:        MONROE & HEDDING
MESSAGE:         CUMULATIVE CONDITIONS  SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:       AM                     N-S      45.00    5.00
COUNT DATE:      4/17/97                E-W      45.00    5.00
ANAL. DATE:      7/2/97
ANAL. INIT:      RD                     CYCLE LENGTH =  100
GROWTH FACTOR % :     0.0               LOST TIME    =  0.100
-------------------------------------------------------------------------
LEG  PATTERN      LANE             APPROVED     PROJECT          TOTAL
                 COUNTS             TRIPS        TRIPS           TRIPS
     LSTSRO    LT  THRU   RT    LT THRU  RT   LT THRU RT     LT  THRU   RT
 N   101100    57   129   27     0    0   0    0   2   4     57   131   31
 E   011010    14   253   61     0    0   0    1   1   0     15   254   61
 S   101010    34   280   20     0    0   0    0   2   0     34   282   20
 W   011010    32   616   57     0    0   6    2   0   0     34   616   63
=========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./   ADJ.   C. CAP.
               L S T S R O                            LANE    G/C
=========================================================================
 N      1     1 0 0 0 0 0     57     1675    0.034   0.075  0.109     183
 E      2     0 1 1 0 0 0    267     3546    0.075   0.150  0.225     798
 S      1     0 0 1 0 0 0    280     1780    0.157   0.075  0.232     413
 W      2     0 1 1 0 0 0    648     3546    0.183   0.150  0.333    1181
                                         LT = 0.100
TOTALS  6                   1252             0.549                   2575
                                      1 - 0.549 = 0.451 /  6 = 0.075
                                                              V/C = 0.486
                                 EXISTING         LEVEL OF SERVICE =   A
-------------------------------------------------------------------------
 N      1     1 0 0 0 0 0     57     1675    0.034   0.075  0.109     183
 E      2     0 1 1 0 0 0    267     3546    0.075   0.150  0.225     798
 S      1     0 0 1 0 0 0    280     1780    0.157   0.075  0.232     413
 W      2     0 1 1 0 0 0    648     3546    0.183   0.150  0.333    1181
                                         LT = 0.100
TOTALS  6                   1252             0.549                   2575
                                      1 - 0.549 = 0.451 /  6 = 0.075
                                                              V/C = 0.486
                            EXISTING + APPROVED   LEVEL OF SERVICE =   A
-------------------------------------------------------------------------
 N      1     1 0 0 0 0 0     57     1675    0.034   0.075  0.109     183
 E      2     0 1 1 0 0 0    269     3545    0.076   0.150  0.226     801
 S      1     0 0 1 0 0 0    282     1780    0.158   0.075  0.233     415
 W      2     0 1 1 0 0 0    650     3546    0.183   0.150  0.333    1181
                                         LT = 0.100
TOTALS  6                   1258             0.551                   2580
                                      1 - 0.551 = 0.449 /  6 = 0.075
                                                              V/C = 0.488
                  EXISTING + APPROVED + PROJECT   LEVEL OF SERVICE =   A
=========================================================================
( 1258 - 1252 )/ 1252 =   0.48 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

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```
                         LEVEL OF SERVICE ANALYSIS
=============================================================================
LOCATION:       MONROE & HEDDING
MESSAGE:        PROJECT CONDITIONS      SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:      PM                      N-S      45.00    5.00
COUNT DATE:     4/17/97                 E-W      45.00    5.00
ANAL. DATE:     7/2/97
ANAL. INIT:     RD                      CYCLE LENGTH =  100
GROWTH FACTOR % :    0.0                LOST TIME    =  0.100
---------------------------------------------------------------------------
LEG  PATTERN     LANE            APPROVED      PROJECT          TOTAL
                COUNTS             TRIPS        TRIPS           TRIPS
     LSTSRO    LT  THRU   RT    LT THRU  RT   LT THRU RT     LT  THRU   RT
 N   101100   111   450   36     0    0   0    0   0   1    111   450   37
 E   011010    71   441   76     0    0   0    0   2   0     71   443   76
 S   101010    28   208   40     6    0   0    0  16  13     34   224   53
 W   011010    74   477  103     0    0   6   11   2   0     85   479  109
===========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./   ADJ.   C. CAP.
               L S T S R O                           LANE    G/C
===========================================================================
 N      1     1 0 0 0 0 0    111     1675    0.066   0.069   0.135     226
 E      2     0 1 1 0 0 0    512     3527    0.145   0.139   0.284    1002
 S      1     0 0 1 0 0 0    208     1780    0.117   0.069   0.186     331
 W      2     0 1 1 0 0 0    551     3528    0.156   0.139   0.295    1041
                                        LT = 0.100
TOTALS  6                   1382                 0.584                   2600
                                       1 - 0.584 = 0.416 /  6 = 0.069
                                                               V/C = 0.532
                                EXISTING          LEVEL OF SERVICE =   A
---------------------------------------------------------------------------
 N      1     1 0 0 0 0 0    111     1675    0.066   0.069   0.135     226
 E      2     0 1 1 0 0 0    512     3527    0.145   0.139   0.284    1002
 S      1     0 0 1 0 0 0    208     1780    0.117   0.069   0.186     331
 W      2     0 1 1 0 0 0    551     3528    0.156   0.139   0.295    1041
                                        LT = 0.100
TOTALS  6                   1382                 0.584                   2600
                                       1 - 0.584 = 0.416 /  6 = 0.069
                                                               V/C = 0.532
                           EXISTING + APPROVED    LEVEL OF SERVICE =   A
---------------------------------------------------------------------------
 N      1     1 0 0 0 0 0    111     1675    0.066   0.067   0.133     223
 E      2     0 1 1 0 0 0    514     3527    0.146   0.134   0.280     988
 S      1     0 0 1 0 0 0    224     1780    0.126   0.067   0.193     344
 W      2     0 1 1 0 0 0    564     3525    0.160   0.134   0.294    1036
                                        LT = 0.100
TOTALS  6                   1413                 0.598                   2591
                                       1 - 0.598 = 0.402 /  6 = 0.067
                                                               V/C = 0.545
                 EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   A
===========================================================================
( 1413 - 1382 )/ 1382 =   2.24 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                          LEVEL OF SERVICE ANALYSIS
===========================================================================
LOCATION:         MONROE & HEDDING
MESSAGE:          CUMULATIVE CONDITIONS   SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:        PM                      N-S       45.00     5.00
COUNT DATE:       4/17/97                 E-W       45.00     5.00
ANAL. DATE:       7/2/97
ANAL. INIT:       RD                      CYCLE LENGTH =  100
GROWTH FACTOR % :    0.0                  LOST TIME    =  0.100
-------------------------------------------------------------------------
LEG  PATTERN       LANE          APPROVED      PROJECT         TOTAL
                  COUNTS           TRIPS         TRIPS          TRIPS
     LSTSRO     LT   THRU   RT   LT THRU  RT   LT THRU RT    LT  THRU   RT
 N   101100    111   450   36     0    0   0    0   8  11   111   458   47
 E   011010     71   441   76     0    0   0    2   2   0    73   443   76
 S   101010     28   208   40     6    0   0    0  24  15    34   232   55
 W   011010     74   477  103     0    0   6   11   2   0    85   479  109
=========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
               L S T S R O                           LANE     G/C
=========================================================================
 N      1     1 0 0 0 0 0     111     1675   0.066   0.069   0.135    226
 E      2     0 1 1 0 0 0     512     3527   0.145   0.139   0.284   1002
 S      1     0 0 1 0 0 0     208     1780   0.117   0.069   0.186    331
 W      2     0 1 1 0 0 0     551     3528   0.156   0.139   0.295   1041
                                          LT = 0.100
TOTALS  6                    1382              0.584                  2600
                                      1 - 0.584 = 0.416 /  6 = 0.069
                                                            V/C = 0.532
                                 EXISTING          LEVEL OF SERVICE =   A
-------------------------------------------------------------------------
 N      1     1 0 0 0 0 0     111     1675   0.066   0.069   0.135    226
 E      2     0 1 1 0 0 0     512     3527   0.145   0.139   0.284   1002
 S      1     0 0 1 0 0 0     208     1780   0.117   0.069   0.186    331
 W      2     0 1 1 0 0 0     551     3528   0.156   0.139   0.295   1041
                                          LT = 0.100
TOTALS  6                    1382              0.584                  2600
                                      1 - 0.584 = 0.416 /  6 = 0.069
                                                            V/C = 0.532
                             EXISTING + APPROVED   LEVEL OF SERVICE =   A
-------------------------------------------------------------------------
 N      1     1 0 0 0 0 0     111     1675   0.066   0.066   0.132    221
 E      2     0 1 1 0 0 0     516     3526   0.146   0.133   0.279    984
 S      1     0 0 1 0 0 0     232     1780   0.130   0.066   0.196    349
 W      2     0 1 1 0 0 0     564     3525   0.160   0.133   0.293   1033
                                          LT = 0.100
TOTALS  6                    1423              0.602                  2587
                                      1 - 0.602 = 0.398 /  6 = 0.066
                                                            V/C = 0.550
                     EXISTING + APPROVED + PROJECT   LEVEL OF SERVICE =   A
=========================================================================
( 1423 - 1382 )/ 1382 =   2.97 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
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97-036

```
                          LEVEL OF SERVICE ANALYSIS
==========================================================================
LOCATION:       WINCHESTER & HEDDING
MESSAGE:        PROJECT CONDITIONS      SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:      AM                      N-S       45.00    5.00
COUNT DATE:     4/17/97                 E-W       45.00    5.00
ANAL. DATE:     7/2/97
ANAL. INIT:     RD                      CYCLE LENGTH =  100
GROWTH FACTOR % :    0.0                LOST TIME     =  0.100
------------------------------------------------------------------------
LEG  PATTERN       LANE             APPROVED      PROJECT           TOTAL
                  COUNTS             TRIPS         TRIPS            TRIPS
     LSTSRO      LT   THRU    RT    LT THRU   RT   LT THRU RT      LT  THRU  RT
 N   102010      41    216    38     0    0    0    0   5   0      41   221  38
 E   102010      39    229    31     0    0    0    5   0   0      44   229  31
 S   102010     145    867   176     0    0    0    0   3   2     145   870  178
 W   101100      40    472    89     0    0    6    0   0   0      40   472  95
========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./   ADJ.   C. CAP.
              L S T S R O                             LANE    G/C
========================================================================
 N       1    1 0 0 0 0 0       41     1675   0.024   0.075  0.099     166
 E       1    1 0 0 0 0 0       39     1675   0.023   0.075  0.098     164
 S       2    0 0 2 0 0 0      867     3560   0.244   0.150  0.394    1403
 W       2    0 0 1 1 0 0      561     3526   0.159   0.150  0.309    1090
                                         LT = 0.100
TOTALS  6                     1508            0.550                   2823
                                     1 - 0.550 = 0.450 /  6 = 0.075
                                                             V/C = 0.534
                              EXISTING             LEVEL OF SERVICE =   A
------------------------------------------------------------------------
 N       1    1 0 0 0 0 0       41     1675   0.024   0.075  0.099     166
 E       1    1 0 0 0 0 0       39     1675   0.023   0.075  0.098     164
 S       2    0 0 2 0 0 0      867     3560   0.244   0.149  0.393    1399
 W       2    0 0 1 1 0 0      567     3525   0.161   0.149  0.310    1093
                                         LT = 0.100
TOTALS  6                     1514            0.552                   2822
                                     1 - 0.552 = 0.448 /  6 = 0.075
                                                             V/C = 0.536
                         EXISTING + APPROVED       LEVEL OF SERVICE =   A
------------------------------------------------------------------------
 N       1    1 0 0 0 0 0       41     1675   0.024   0.074  0.098     164
 E       1    1 0 0 0 0 0       44     1675   0.026   0.074  0.100     168
 S       2    0 0 2 0 0 0      870     3560   0.244   0.148  0.392    1396
 W       2    0 0 1 1 0 0      567     3525   0.161   0.148  0.309    1089
                                         LT = 0.100
TOTALS  6                     1522            0.555                   2817
                                     1 - 0.555 = 0.445 /  6 = 0.074
                                                             V/C = 0.540
                EXISTING + APPROVED + PROJECT      LEVEL OF SERVICE =   A
========================================================================
( 1522 - 1514 )/ 1514 =   0.53 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
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```
                         LEVEL OF SERVICE ANALYSIS
============================================================================
LOCATION:       WINCHESTER & HEDDING
MESSAGE:        CUMULATIVE CONDITIONS  SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:      AM                     N-S      45.00     5.00
COUNT DATE:     4/17/97                E-W      45.00     5.00
ANAL. DATE:     7/2/97
ANAL. INIT:     RD                     CYCLE LENGTH =  100
GROWTH FACTOR % :    0.0               LOST TIME    =  0.100
----------------------------------------------------------------------------
LEG  PATTERN      LANE             APPROVED     PROJECT          TOTAL
                 COUNTS              TRIPS        TRIPS            TRIPS
     LSTSRO     LT  THRU   RT    LT THRU  RT   LT THRU RT     LT  THRU   RT
 N   102010     41   216   38     0    0   0    0    7  0     41   223   38
 E   102010     39   229   31     0    0   0    5    0  0     44   229   31
 S   102010    145   867  176     0    0   0    1    4  2    146   871  178
 W   101100     40   472   89     0    0   6    0    0  2     40   472   97
============================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
              L S T S R O                              LANE    G/C
============================================================================
 N      1     1 0 0 0 0 0      41     1675   0.024   0.075   0.099     166
 E      1     1 0 0 0 0 0      39     1675   0.023   0.075   0.098     164
 S      2     0 0 2 0 0 0     867     3560   0.244   0.150   0.394    1403
 W      2     0 0 1 1 0 0     561     3526   0.159   0.150   0.309    1090
                                        LT = 0.100
TOTALS  6                    1508            0.550                    2823
                                    1 - 0.550 = 0.450 /  6 = 0.075
                                                            V/C = 0.534
                            EXISTING            LEVEL OF SERVICE =   A
----------------------------------------------------------------------------
 N      1     1 0 0 0 0 0      41     1675   0.024   0.075   0.099     166
 E      1     1 0 0 0 0 0      39     1675   0.023   0.075   0.098     164
 S      2     0 0 2 0 0 0     867     3560   0.244   0.149   0.393    1399
 W      2     0 0 1 1 0 0     567     3525   0.161   0.149   0.310    1093
                                        LT = 0.100
TOTALS  6                    1514            0.552                    2822
                                    1 - 0.552 = 0.448 /  6 = 0.075
                                                            V/C = 0.536
                        EXISTING + APPROVED     LEVEL OF SERVICE =   A
----------------------------------------------------------------------------
 N      1     1 0 0 0 0 0      41     1675   0.024   0.074   0.098     164
 E      1     1 0 0 0 0 0      44     1675   0.026   0.074   0.100     168
 S      2     0 0 2 0 0 0     871     3560   0.245   0.148   0.393    1399
 W      2     0 0 1 1 0 0     569     3524   0.161   0.148   0.309    1089
                                        LT = 0.100
TOTALS  6                    1525            0.556                    2820
                                    1 - 0.556 = 0.444 /  6 = 0.074
                                                            V/C = 0.541
               EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   A
============================================================================
( 1525 - 1514 )/ 1514 =   0.73 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                          LEVEL OF SERVICE ANALYSIS
===============================================================================
LOCATION:       WINCHESTER & HEDDING
MESSAGE:        PROJECT CONDITIONS       SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:      PM                       N-S      45.00     5.00
COUNT DATE:     4/17/97                  E-W      45.00     5.00
ANAL. DATE:     7/2/97
ANAL. INIT:     RD                       CYCLE LENGTH =  100
GROWTH FACTOR % :     0.0                LOST TIME     =  0.100
-----------------------------------------------------------------------------
LEG  PATTERN       LANE        .      APPROVED      PROJECT            TOTAL
                  COUNTS               TRIPS         TRIPS              TRIPS
     LSTSRO     LT   THRU    RT     LT THRU   RT    LT THRU RT     LT   THRU   RT
 N   102010     59   711     79      0    0    0     0  16   0     59   727    79
 E   102010     90   347     37      0    0    0    13   0   0    103   347    37
 S   102010    210   396     74      0    0    0     0  16  13    210   412    87
 W   101100     47   475    229      0    0    0     0   0   0     47   475   229
=============================================================================
LEG  # LANES  CRIT. MOVE    C. VOL.  T. CAP.   G/C     ADJ./    ADJ.    C. CAP.
              L S T S R O                               LANE     G/C
=============================================================================
 N       2    0 0 2 0 0 0     711      3560    0.200    0.107   0.307     1093
 E       1    1 0 0 0 0 0      90      1675    0.054    0.053   0.107      179
 S       1    1 0 0 0 0 0     210      1675    0.125    0.053   0.178      298
 W       2    0 0 1 1 0 0     704      3503    0.201    0.107   0.308     1079
                                          LT = 0.100
TOTALS   6                   1715              0.680                      2649
                                     1 - 0.680 = 0.320 /  6 = 0.053
                                                                 V/C = 0.647
                               EXISTING           LEVEL OF SERVICE =    B
-----------------------------------------------------------------------------
 N       2    0 0 2 0 0 0     711      3560    0.200    0.107   0.307     1093
 E       1    1 0 0 0 0 0      90      1675    0.054    0.053   0.107      179
 S       1    1 0 0 0 0 0     210      1675    0.125    0.053   0.178      298
 W       2    0 0 1 1 0 0     704      3503    0.201    0.107   0.308     1079
                                          LT = 0.100
TOTALS   6                   1715              0.680                      2649
                                     1 - 0.680 = 0.320 /  6 = 0.053
                                                                 V/C = 0.647
                         EXISTING + APPROVED      LEVEL OF SERVICE =    B
-----------------------------------------------------------------------------
 N       2    0 0 2 0 0 0     727      3560    0.204    0.103   0.307     1093
 E       1    1 0 0 0 0 0     103      1675    0.061    0.051   0.112      188
 S       1    1 0 0 0 0 0     210      1675    0.125    0.051   0.176      295
 W       2    0 0 1 1 0 0     704      3503    0.201    0.103   0.304     1065
                                          LT = 0.100
TOTALS   6                   1744              0.691                      2641
                                     1 - 0.691 = 0.309 /  6 = 0.051
                                                                 V/C = 0.660
                  EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =    B
=============================================================================
( 1744 - 1715 )/ 1715 =    1.69 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

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```
                           LEVEL OF SERVICE ANALYSIS
==========================================================================
LOCATION:      WINCHESTER & HEDDING
MESSAGE:       CUMULATIVE CONDTIONS    SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:     PM                      N-S      45.00    5.00
COUNT DATE:    4/17/97                 E-W      45.00    5.00
ANAL. DATE:    7/2/97
ANAL. INIT:    RD                      CYCLE LENGTH =  100
GROWTH FACTOR % :     0.0              LOST TIME    =  0.100
------------------------------------------------------------------------
LEG  PATTERN      LANE              APPROVED      PROJECT         TOTAL
                 COUNTS               TRIPS        TRIPS          TRIPS
     LSTSRO     LT   THRU    RT    LT  THRU  RT   LT  THRU RT    LT   THRU   RT
 N   102010     59    711    79     0     0   0    0   25   0    59    736   79
 E   102010     90    347    37     0     0   0   13    0   0   103    347   37
 S   102010    210    396    74     0     0   0    6   25  13   216    421   87
 W   101100     47    475   229     0     0   0    0    0   6    47    475  235
========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
               L S T S R O                              LANE     G/C
========================================================================
 N     2      0 0 2 0 0 0    711     3560    0.200   0.107   0.307    1093
 E     1      1 0 0 0 0 0     90     1675    0.054   0.053   0.107     179
 S     1      1 0 0 0 0 0    210     1675    0.125   0.053   0.178     298
 W     2      0 0 1 1 0 0    704     3503    0.201   0.107   0.308    1079
                                        LT = 0.100
TOTALS  6                   1715              0.680                    2649
                                      1 - 0.680 = 0.320 /  6 = 0.053
                                                             V/C = 0.647
                                EXISTING          LEVEL OF SERVICE =   B
------------------------------------------------------------------------
 N     2      0 0 2 0 0 0    711     3560    0.200   0.107   0.307    1093
 E     1      1 0 0 0 0 0     90     1675    0.054   0.053   0.107     179
 S     1      1 0 0 0 0 0    210     1675    0.125   0.053   0.178     298
 W     2      0 0 1 1 0 0    704     3503    0.201   0.107   0.308    1079
                                        LT = 0.100
TOTALS  6                   1715              0.680                    2649
                                      1 - 0.680 = 0.320 /  6 = 0.053
                                                             V/C = 0.647
                            EXISTING + APPROVED    LEVEL OF SERVICE =   B
------------------------------------------------------------------------
 N     2      0 0 2 0 0 0    736     3560    0.207   0.100   0.307    1093
 E     1      1 0 0 0 0 0    103     1675    0.061   0.050   0.111     186
 S     1      1 0 0 0 0 0    216     1675    0.129   0.050   0.179     300
 W     2      0 0 1 1 0 0    710     3502    0.203   0.100   0.303    1061
                                        LT = 0.100
TOTALS  6                   1765              0.700                    2640
                                      1 - 0.700 = 0.300 /  6 = 0.050
                                                             V/C = 0.669
                 EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   B
========================================================================
( 1765 - 1715 )/ 1715 =   2.92 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

```
                              LEVEL OF SERVICE ANALYSIS
==============================================================================
LOCATION:      MONROE & STEVENS CREEK
MESSAGE:       PROJECT CONDITIONS       SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:     AM                       N-S      46.50    8.50
COUNT DATE:    4/9/97                   E-W      63.50    7.50
ANAL. DATE:    7/2/97
ANAL. INIT:    RO                       CYCLE LENGTH =  126
GROWTH FACTOR % :    0.0                LOST TIME    =  0.127
----------------------------------------------------------------------------
LEG  PATTERN       LANE              APPROVED      PROJECT          TOTAL
                  COUNTS              TRIPS         TRIPS           TRIPS
     LSTSRO     LT   THRU   RT     LT THRU  RT    LT THRU RT     LT  THRU   RT
 N   110010     61      9   15      0   12   0     0    0  0     61    21   15
 E   203010    395   1689  177    252   11   0    55  100  0    702  1800  177
 S   101010     28     23  180      5    3 109     0    0 105    33    26  394
 W   203010     25    761   27      0   14  20     0  167  0     25   942   47
============================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
              L S T S R O                             LANE     G/C
============================================================================
 N      2     1 1 0 0 0 0      70     3089   0.023   0.127   0.150     463
 E      3     0 0 3 0 0 0    1689     5340   0.316   0.191   0.507    2707
 S      1     1 0 0 0 0 0      28     1675   0.017   0.064   0.081     136
 W      2     2 0 0 0 0 0      25     3015   0.008   0.127   0.135     407
                                          LT = 0.127
TOTALS  8                    1812            0.491                    3713
                                        1 - 0.491 = 0.509 /  8 = 0.064
                                                             V/C = 0.488
                                   EXISTING         LEVEL OF SERVICE =   A
----------------------------------------------------------------------------
 N      2     1 1 0 0 0 0      82     3142   0.026   0.117   0.143     449
 E      2     2 0 0 0 0 0     647     3015   0.215   0.117   0.332    1001
 S      1     1 0 0 0 0 0      33     1675   0.020   0.058   0.078     131
 W      3     0 0 3 0 0 0     775     5340   0.145   0.175   0.320    1709
                                          LT = 0.127
TOTALS  8                    1537            0.533                    3290
                                        1 - 0.533 = 0.467 /  8 = 0.058
                                                             V/C = 0.467
                               EXISTING + APPROVED  LEVEL OF SERVICE =   A
----------------------------------------------------------------------------
 N      2     1 1 0 0 0 0      82     3142   0.026   0.105   0.131     412
 E      2     2 0 0 0 0 0     702     3015   0.233   0.105   0.338    1019
 S      1     1 0 0 0 0 0      33     1675   0.020   0.052   0.072     121
 W      3     0 0 3 0 0 0     942     5340   0.176   0.157   0.333    1778
                                          LT = 0.127
TOTALS  8                    1759            0.582                    3330
                                        1 - 0.582 = 0.418 /  8 = 0.052
                                                             V/C = 0.528
                     EXISTING + APPROVED + PROJECT  LEVEL OF SERVICE =   A
============================================================================
( 1759 - 1537 )/ 1537 =  14.44 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

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                         LEVEL OF SERVICE ANALYSIS
============================================================================
LOCATION:        MONROE & STEVENS CREEK
MESSAGE:         CUMUALTIVE CONDITIONS   SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:       AM                      N-S      46.50    8.50
COUNT DATE:      4/9/97                  E-W      63.50    7.50
ANAL. DATE:      7/2/97
ANAL. INIT:      RD                      CYCLE LENGTH =  126
GROWTH FACTOR % :    0.0                 LOST TIME    =  0.127
---------------------------------------------------------------------------
LEG  PATTERN      LANE            APPROVED      PROJECT          TOTAL
                 COUNTS             TRIPS        TRIPS            TRIPS
     LSTSRO     LT   THRU   RT    LT THRU  RT    LT THRU RT     LT   THRU   RT
 N   110010     61     9    15     0   12   0     8    0   0     69    21    15
 E   203010    395  1689   177   252   11   0    55  112  13    702  1812   190
 S   101010     28    23   180     5    3 109     0    0 105     33    26   394
 W   203010     25   761    27     0   14  20     0  174   0     25   949    47
===========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
              L S T S R O                             LANE     G/C
===========================================================================
 N      2     1 1 0 0 0 0      70     3089   0.023   0.127   0.150     463
 E      3     0 0 3 0 0 0    1689     5340   0.316   0.191   0.507    2707
 S      1     1 0 0 0 0 0      28     1675   0.017   0.064   0.081     136
 W      2     2 0 0 0 0 0      25     3015   0.008   0.127   0.135     407
                                         LT = 0.127
TOTALS  8                    1812            0.491                    3713
                                       1 - 0.491 = 0.509 /  8 = 0.064
                                                            V/C = 0.488
                               EXISTING          LEVEL OF SERVICE =   A
---------------------------------------------------------------------------
 N      2     1 1 0 0 0 0      82     3142   0.026   0.117   0.143     449
 E      2     2 0 0 0 0 0     647     3015   0.215   0.117   0.332    1001
 S      1     1 0 0 0 0 0      33     1675   0.020   0.058   0.078     131
 W      3     0 0 3 0 0 0     775     5340   0.145   0.175   0.320    1709
                                         LT = 0.127
TOTALS  8                    1537            0.533                    3290
                                       1 - 0.533 = 0.467 /  8 = 0.058
                                                            V/C = 0.467
                          EXISTING + APPROVED    LEVEL OF SERVICE =   A
---------------------------------------------------------------------------
 N      2     1 1 0 0 0 0      90     3134   0.029   0.103   0.132     414
 E      2     2 0 0 0 0 0     702     3015   0.233   0.103   0.336    1013
 S      1     1 0 0 0 0 0      33     1675   0.020   0.052   0.072     121
 W      3     0 0 3 0 0 0     949     5340   0.178   0.155   0.333    1778
                                         LT = 0.127
TOTALS  8                    1774            0.587                    3326
                                       1 - 0.587 = 0.413 /  8 = 0.052
                                                            V/C = 0.533
                EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   A
===========================================================================
( 1774 - 1537 )/ 1537 =  15.42 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

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                            LEVEL OF SERVICE ANALYSIS
==========================================================================
LOCATION:        MONROE & STEVENS CREEK
MESSAGE:         PROJECT CONDITIONS      SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:       PM                      N-S      46.50    8.50
COUNT DATE:      7/8/97                  E-W      71.50    7.50
ANAL. DATE:      7/2/97
ANAL. INIT:      RD                      CYCLE LENGTH =  134
GROWTH FACTOR % :     0.0                LOST TIME    =  0.119
-------------------------------------------------------------------------
LEG  PATTERN      LANE             APPROVED     PROJECT          TOTAL
                 COUNTS              TRIPS       TRIPS           TRIPS
     LSTSRO    LT   THRU   RT    LT THRU  RT   LT THRU RT     LT  THRU   RT
 N   110010   518     45  114     0    3  22    0   0   0    518    48  136
 E   203010   352   1581  395   109  106   0  124 245   0    585  1932  395
 S   101010    37     35  256    20   12 299    0   0  85     57    47  640
 W   203010    74   1749   18    81   57   5    0 187   0    155  1993   23
==========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.    G/C    ADJ./    ADJ.   C. CAP.
              L S T S R O                             LANE     G/C
==========================================================================
 N      2     1 1 0 0 0 0     563     3065    0.184   0.058   0.242     742
 E      2     2 0 0 0 0 0     352     3015    0.117   0.058   0.175     528
 S      1     1 0 0 0 0 0      37     1675    0.022   0.029   0.051      85
 W      3     0 0 3 0 0 0    1749     5340    0.328   0.086   0.414    2211
                                         LT = 0.119
TOTALS  8                    2701             0.770                    3566
                                   1 - 0.770 = 0.230 /  8 = 0.029
                                                           V/C = 0.757
                               EXISTING           LEVEL OF SERVICE =   C
-------------------------------------------------------------------------
 N      2     1 1 0 0 0 0     566     3067    0.185   0.043   0.228     699
 E      2     2 0 0 0 0 0     461     3015    0.153   0.043   0.196     591
 S      1     1 0 0 0 0 0      57     1675    0.034   0.021   0.055      92
 W      3     0 0 3 0 0 0    1806     5340    0.338   0.064   0.402    2147
                                         LT = 0.119
TOTALS  8                    2890             0.829                    3529
                                   1 - 0.829 = 0.171 /  8 = 0.021
                                                           V/C = 0.819
                          EXISTING + APPROVED     LEVEL OF SERVICE =   D
-------------------------------------------------------------------------
 N      2     1 1 0 0 0 0     566     3067    0.185   0.024   0.209     641
 E      2     2 0 0 0 0 0     585     3015    0.194   0.024   0.218     657
 S      1     1 0 0 0 0 0      57     1675    0.034   0.012   0.046      77
 W      3     0 0 3 0 0 0    1993     5340    0.373   0.036   0.409    2184
                                         LT = 0.119
TOTALS  8                    3201             0.905                    3559
                                   1 - 0.905 = 0.095 /  8 = 0.012
                                                           V/C = 0.899
                EXISTING + APPROVED + PROJECT     LEVEL OF SERVICE =   D
==========================================================================
( 3201 - 2890 )/ 2890 =  10.76 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

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```
                     LEVEL OF SERVICE ANALYSIS
=======================================================================
LOCATION:       MONROE & STEVENS CREEK
MESSAGE:        CUMULATIVE CONDTIONS   SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:      PM                     N-S      46.50    8.50
COUNT DATE:     7/8/97                 E-W      71.50    7.50
ANAL. DATE:     7/2/97
ANAL. INIT:     RD                     CYCLE LENGTH =  134
GROWTH FACTOR % :    0.0               LOST TIME    =  0.119
-----------------------------------------------------------------------
LEG  PATTERN      LANE          APPROVED     PROJECT         TOTAL
                 COUNTS          TRIPS        TRIPS          TRIPS
     LSTSRO   LT   THRU  RT    LT THRU  RT   LT THRU RT    LT  THRU   RT
 N   110010  518    45  114     0    3  22   47    0  0   565    48  136
 E   203010  352  1581  395   109  106   0  124  290 47   585  1977  442
 S   101010   37    35  256    20   12 299    0    0 85    57    47  640
 W   203010   74  1749   18    81   57   5    0  232  0   155  2038   23
=======================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./   ADJ.  C. CAP.
               L S T S R O                           LANE    G/C
=======================================================================
 N      2     1 1 0 0 0 0    563     3065    0.184   0.058   0.242    742
 E      2     2 0 0 0 0 0    352     3015    0.117   0.058   0.175    528
 S      1     1 0 0 0 0 0     37     1675    0.022   0.029   0.051     85
 W      3     0 0 3 0 0 0   1749     5340    0.328   0.086   0.414   2211
                                          LT = 0.119
TOTALS  8                   2701             0.770                   3566
                                     1 - 0.770 = 0.230 /  8 = 0.029
                                                           V/C = 0.757
                            EXISTING              LEVEL OF SERVICE =  C
-----------------------------------------------------------------------
 N      2     1 1 0 0 0 0    566     3067    0.185   0.043   0.228    699
 E      2     2 0 0 0 0 0    461     3015    0.153   0.043   0.196    591
 S      1     1 0 0 0 0 0     57     1675    0.034   0.021   0.055     92
 W      3     0 0 3 0 0 0   1806     5340    0.338   0.064   0.402   2147
                                          LT = 0.119
TOTALS  8                   2890             0.829                   3529
                                     1 - 0.829 = 0.171 /  8 = 0.021
                                                           V/C = 0.819
                       EXISTING + APPROVED        LEVEL OF SERVICE =  D
-----------------------------------------------------------------------
 N      2     1 1 0 0 0 0    613     3064    0.200   0.018   0.218    668
 E      2     2 0 0 0 0 0    585     3015    0.194   0.018   0.212    639
 S      1     1 0 0 0 0 0     57     1675    0.034   0.009   0.043     72
 W      3     0 0 3 0 0 0   2038     5340    0.382   0.027   0.409   2184
                                          LT = 0.119
TOTALS  8                   3293             0.929                   3563
                                     1 - 0.929 = 0.071 /  8 = 0.009
                                                           V/C = 0.924
               EXISTING + APPROVED + PROJECT      LEVEL OF SERVICE =  E
=======================================================================
( 3293 - 2890 )/ 2890 =  13.94 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

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```
                               LEVEL OF SERVICE ANALYSIS
==========================================================================
LOCATION:       MONROE & STEVENS CREEK
MESSAGE:        CUMULATIVE CONDTIONS    SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:      PM        MITIGATION    N-S        46.50     8.50
COUNT DATE:     7/8/97                  E-W        71.50     7.50
ANAL. DATE:     7/2/97
ANAL. INIT:     RD                      CYCLE LENGTH =  134
GROWTH FACTOR % :    0.0                LOST TIME    =  0.119
------------------------------------------------------------------------
LEG  PATTERN      LANE              APPROVED     PROJECT            TOTAL
                 COUNTS               TRIPS       TRIPS             TRIPS
     LSTSRO    LT   THRU   RT     LT THRU  RT   LT THRU RT      LT   THRU   RT
 N   110010   518     45  114      0    3  22   47    0   0     565     48  136
 E   203010   352   1581  395    109  106   0  124  290  47     585   1977  442
 S   101010    37     35  256     20   12 299    0    0  85      57     47  640
 W   203100    74   1749   18     81   57   5    0  232   0     155   2038   23
========================================================================
LEG  # LANES  CRIT. MOVE    C. VOL.  T. CAP.   G/C     ADJ./    ADJ.   C. CAP.
               L S T S R O                             LANE     G/C
========================================================================
 N       2    1 1 0 0 0 0     563     3065    0.184   0.069   0.253     775
 E       2    2 0 0 0 0 0     352     3015    0.117   0.069   0.186     561
 S       1    1 0 0 0 0 0      37     1675    0.022   0.034   0.056      94
 W       4    0 0 3 1 0 0    1767     7110    0.249   0.137   0.386    2744
                                          LT = 0.119
TOTALS   9                   2719             0.691                    4174
                                      1 - 0.691 = 0.309 /  9 = 0.034
                                                             V/C = 0.651
                                   EXISTING         LEVEL OF SERVICE =   B
------------------------------------------------------------------------
 N       2    1 1 0 0 0 0     566     3067    0.185   0.056   0.241     739
 E       2    2 0 0 0 0 0     461     3015    0.153   0.056   0.209     630
 S       1    1 0 0 0 0 0      57     1675    0.034   0.028   0.062     104
 W       4    0 0 3 1 0 0    1829     7108    0.257   0.112   0.369    2623
                                          LT = 0.119
TOTALS   9                   2913             0.748                    4096
                                      1 - 0.748 = 0.252 /  9 = 0.028
                                                             V/C = 0.711
                              EXISTING + APPROVED    LEVEL OF SERVICE =   C
------------------------------------------------------------------------
 N       2    1 1 0 0 0 0     613     3064    0.200   0.036   0.236     723
 E       2    2 0 0 0 0 0     585     3015    0.194   0.036   0.230     693
 S       1    1 0 0 0 0 0      57     1675    0.034   0.018   0.052      87
 W       4    0 0 3 1 0 0    2061     7109    0.290   0.072   0.362    2573
                                          LT = 0.119
TOTALS   9                   3316             0.837                    4076
                                      1 - 0.837 = 0.163 /  9 = 0.018
                                                             V/C = 0.814
                    EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   D
========================================================================
( 3316 - 2913 )/ 2913 =  13.83 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
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                          LEVEL OF SERVICE ANALYSIS
===========================================================================
LOCATION:       MONROE & STEVENS CREEK
MESSAGE:        PROJECT CONDITIONS    SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:      SATURDAY PEAK         N-S      46.50    8.50
COUNT DATE:     7/19/97               E-W      71.50    7.50
ANAL. DATE:     7/2/97
ANAL. INIT:     RD                    CYCLE LENGTH =  134
GROWTH FACTOR % :    0.0              LOST TIME    =  0.119
-------------------------------------------------------------------------
LEG  PATTERN       LANE             APPROVED     PROJECT          TOTAL
                  COUNTS             TRIPS        TRIPS           TRIPS
     LSTSRO     LT   THRU   RT     LT THRU  RT    LT THRU RT      LT  THRU   RT
 N   110010    740    25   279     0    3   22     0   0   0     740    28  301
 E   203010    164  1268   908   109  106    0   124 248   0     397  1622  908
 S   101010     24    40   157    20   12  299     0   0  85      44    52  541
 W   203010    137  1989    16    81   57    5     0 190   0     218  2236   21
=========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C     ADJ./    ADJ.   C. CAP.
              L S T S R O                              LANE     G/C
=========================================================================
 N      2     1 1 0 0 0 0     765     3037    0.252   0.045   0.297     902
 E      2     2 0 0 0 0 0     164     3015    0.054   0.045   0.099     298
 S      1     0 0 1 0 0 0      40     1780    0.022   0.023   0.045      80
 W      3     0 0 3 0 0 0    1989     5340    0.372   0.068   0.440    2350
                                         LT = 0.119
TOTALS  8                    2958             0.819                      3630
                                     1 - 0.819 = 0.181 /  8 = 0.023
                                                           V/C = 0.815
                              EXISTING          LEVEL OF SERVICE =   D
-------------------------------------------------------------------------
 N      2     1 1 0 0 0 0     768     3040    0.253   0.031   0.284     863
 E      2     2 0 0 0 0 0     273     3015    0.091   0.031   0.122     368
 S      1     0 0 1 0 0 0      52     1780    0.029   0.016   0.045      80
 W      3     0 0 3 0 0 0    2046     5340    0.383   0.047   0.430    2296
                                         LT = 0.119
TOTALS  8                    3139             0.875                      3607
                                     1 - 0.875 = 0.125 /  8 = 0.016
                                                           V/C = 0.870
                         EXISTING + APPROVED    LEVEL OF SERVICE =   D
-------------------------------------------------------------------------
 N      2     1 1 0 0 0 0     768     3040    0.253   0.012   0.265     806
 E      2     2 0 0 0 0 0     397     3015    0.132   0.012   0.144     434
 S      1     0 0 1 0 0 0      52     1780    0.029   0.006   0.035      62
 W      3     0 0 3 0 0 0    2236     5340    0.419   0.018   0.437    2334
                                         LT = 0.119
TOTALS  8                    3453             0.952                      3636
                                     1 - 0.952 = 0.048 /  8 = 0.006
                                                           V/C = 0.950
                 EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   E
=========================================================================
( 3453 - 3139 )/ 3139 =  10.00 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

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```
                          LEVEL OF SERVICE ANALYSIS
==========================================================================
LOCATION:      MONROE & STEVENS CREEK
MESSAGE:       PROJECT CONDITIONS      SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:     SATURDAY PEAK MITIGATED N-S      46.50    8.50
COUNT DATE:    7/19/97                 E-W      71.50    7.50
ANAL. DATE:    7/2/97
ANAL. INIT:    RD                      CYCLE LENGTH =  134
GROWTH FACTOR % :     0.0              LOST TIME    =  0.119
------------------------------------------------------------------------
LEG  PATTERN       LANE              APPROVED     PROJECT          TOTAL
                  COUNTS               TRIPS       TRIPS            TRIPS
     LSTSRO     LT  THRU   RT     LT THRU  RT    LT THRU RT     LT  THRU   RT
 N   110010    740    25  279      0    3  22     0    0   0    740    28  301
 E   203010    164  1268  908    109  106   0   124  248   0    397  1622  908
 S   101010     24    40  157     20   12 299     0    0  85     44    52  541
 W   203100    137  1989   16     81   57   5     0  190   0    218  2236   21
========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   V/C    ADJ./   ADJ.   C. CAP.
              L S T S R O                            LANE    V/C
========================================================================
 N      2     1 1 0 0 0 0     765     3037   0.252   0.060   0.312     948
 E      2     2 0 0 0 0 0     164     3015   0.054   0.060   0.114     344
 S      1     0 0 1 0 0 0      40     1780   0.022   0.030   0.052      93
 W      4     0 0 3 1 0 0    2005     7112   0.282   0.120   0.402    2859
                                        LT = 0.119
TOTALS  9                    2974            0.729                    4244
                                       1 - 0.729 = 0.271 /  9 = 0.030
                                                               V/C = 0.701
                                 EXISTING          LEVEL OF SERVICE =   C
------------------------------------------------------------------------
 N      2     1 1 0 0 0 0     768     3040   0.253   0.048   0.301     915
 E      2     2 0 0 0 0 0     273     3015   0.091   0.048   0.139     419
 S      1     0 0 1 0 0 0      52     1780   0.029   0.024   0.053      94
 W      4     0 0 3 1 0 0    2067     7110   0.291   0.096   0.387    2752
                                        LT = 0.119
TOTALS  9                    3160            0.783                    4180
                                       1 - 0.783 = 0.217 /  9 = 0.024
                                                               V/C = 0.756
                             EXISTING + APPROVED    LEVEL OF SERVICE =   C
------------------------------------------------------------------------
 N      2     1 1 0 0 0 0     768     3040   0.253   0.033   0.286     869
 E      2     2 0 0 0 0 0     397     3015   0.132   0.033   0.165     497
 S      1     0 0 1 0 0 0      52     1780   0.029   0.017   0.046      82
 W      4     0 0 3 1 0 0    2257     7111   0.317   0.067   0.384    2731
                                        LT = 0.119
TOTALS  9                    3474            0.850                    4179
                                       1 - 0.850 = 0.150 /  9 = 0.017
                                                               V/C = 0.831
                   EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   D
========================================================================
( 3474 - 3160 )/ 3160 =    9.94 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                         LEVEL OF SERVICE ANALYSIS
=======================================================================
LOCATION:       MONROE & STEVENS CREEK
MESSAGE:        CUMULATIVE CONDITIONS  SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:      SATURDAY PEAK          N-S      46.50     8.50
COUNT DATE:     7/19/97                E-W      71.50     7.50
ANAL. DATE:     7/2/97
ANAL. INIT:     RD                     CYCLE LENGTH =  134
GROWTH FACTOR % :     0.0              LOST TIME     =  0.119
-----------------------------------------------------------------------
LEG  PATTERN       LANE            APPROVED     PROJECT          TOTAL
                  COUNTS             TRIPS        TRIPS           TRIPS
     LSTSRO     LT   THRU   RT    LT  THRU  RT   LT THRU RT    LT  THRU   RT
 N   110010    740     25  279     0     3  22   58    0  0   798    28  301
 E   203010    164   1268  908   109   106   0  124  304 58   397  1678  966
 S   101010     24     40  157    20    12 299    0    0 85    44    52  541
 W   203010    137   1989   16    81    57   5    0  246  0   218  2292   21
=======================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
               L S T S R O                            LANE     G/C
=======================================================================
 N      2     1 1 0 0 0 0     765     3037    0.252   0.045   0.297    902
 E      2     2 0 0 0 0 0     164     3015    0.054   0.045   0.099    298
 S      1     0 0 1 0 0 0      40     1780    0.022   0.023   0.045     80
 W      3     0 0 3 0 0 0    1989     5340    0.372   0.068   0.440   2350
                                         LT = 0.119
TOTALS  8                    2958             0.819                   3630
                                       1 - 0.819 = 0.181 /  8 = 0.023
                                                            V/C = 0.815
                                 EXISTING            LEVEL OF SERVICE =  D
-----------------------------------------------------------------------
 N      2     1 1 0 0 0 0     768     3040    0.253   0.031   0.284    863
 E      2     2 0 0 0 0 0     273     3015    0.091   0.031   0.122    368
 S      1     0 0 1 0 0 0      52     1780    0.029   0.016   0.045     80
 W      3     0 0 3 0 0 0    2046     5340    0.383   0.047   0.430   2296
                                         LT = 0.119
TOTALS  8                    3139             0.875                   3607
                                       1 - 0.875 = 0.125 /  8 = 0.016
                                                            V/C = 0.870
                         EXISTING + APPROVED    LEVEL OF SERVICE =  D
-----------------------------------------------------------------------
 N      2     1 1 0 0 0 0     826     3038    0.272   0.005   0.277    842
 E      2     2 0 0 0 0 0     397     3015    0.132   0.005   0.137    413
 S      1     0 0 1 0 0 0      52     1780    0.029   0.002   0.031     55
 W      3     0 0 3 0 0 0    2292     5340    0.429   0.007   0.436   2328
                                         LT = 0.119
TOTALS  8                    3567             0.981                   3638
                                       1 - 0.981 = 0.019 /  8 = 0.002
                                                            V/C = 0.980
               EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =  E
=======================================================================
( 3567 - 3139 )/ 3139 =  13.63 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

With Mitigation

.272
.132
.029
.322

.755
.119

.874

```
                         LEVEL OF SERVICE ANALYSIS
==========================================================================
LOCATION:      MONROE & STEVENS CREEK
MESSAGE:       CUMULATIVE SATURDAY    SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:     PM  MITIGATION         N-S      46.50    8.50
COUNT DATE:    7/19/97                E-W      71.50    7.50
ANAL. DATE:    7/2/97
ANAL. INIT:    RD                     CYCLE LENGTH =  134
GROWTH FACTOR % :    0.0              LOST TIME    =  0.119
------------------------------------------------------------------------
LEG  PATTERN      LANE          APPROVED     PROJECT          TOTAL
                 COUNTS          TRIPS        TRIPS           TRIPS
     LSTSRO    LT  THRU   RT    LT THRU  RT    LT THRU RT    LT  THRU   RT
 N   110010   740    25  279     0    3  22    58    0   0   798    28  301
 E   203010   164  1268  908   109  106   0   124  304  58   397  1678  966
 S   101010    24    40  157    20   12 299     0    0  85    44    52  541
 W   203100   137  1989   16    81   57   5     0  246   0   218  2292   21
========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./   ADJ.   C. CAP.
               L S T S R O                           LANE    G/C
========================================================================
 N      2    1 1 0 0 0 0     765     3037    0.252   0.060   0.312     948
 E      2    2 0 0 0 0 0     164     3015    0.054   0.060   0.114     344
 S      1    0 0 1 0 0 0      40     1780    0.022   0.030   0.052      93
 W      4    0 0 3 1 0 0    2005     7112    0.282   0.120   0.402    2859
                                       LT = 0.119
TOTALS  9                   2974             0.729                    4244
                                   1 - 0.729 = 0.271 /  9 = 0.030
                                                          V/C = 0.701
                            EXISTING          LEVEL OF SERVICE =   C
------------------------------------------------------------------------
 N      2    1 1 0 0 0 0     768     3040    0.253   0.048   0.301     915
 E      2    2 0 0 0 0 0     273     3015    0.091   0.048   0.139     419
 S      1    0 0 1 0 0 0      52     1780    0.029   0.024   0.053      94
 W      4    0 0 3 1 0 0    2067     7110    0.291   0.096   0.387    2752
                                       LT = 0.119
TOTALS  9                   3160             0.783                    4180
                                   1 - 0.783 = 0.217 /  9 = 0.024
                                                          V/C = 0.756
                        EXISTING + APPROVED   LEVEL OF SERVICE =   C
------------------------------------------------------------------------
 N      2    1 1 0 0 0 0     826     3038    0.272   0.027   0.299     908
 E      2    2 0 0 0 0 0     397     3015    0.132   0.027   0.159     479
 S      1    0 0 1 0 0 0      52     1780    0.029   0.014   0.043      77
 W      4    0 0 3 1 0 0    2313     7111    0.325   0.055   0.380    2702
                                       LT = 0.119
TOTALS  9                   3588             0.877                    4166
                                   1 - 0.877 = 0.123 /  9 = 0.014
                                                          V/C = 0.861
                 EXISTING + APPROVED + PROJECT   LEVEL OF SERVICE =   D
========================================================================
( 3588 - 3160 )/ 3160 =  13.54 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

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                             LEVEL OF SERVICE ANALYSIS
=========================================================================
LOCATION:         SAN TOMAS & MOORPARK
MESSAGE:          PROJECT CONDITIONS       SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:        AM                       N-S      45.00     5.00
COUNT DATE:       4/17/97                  E-W      45.00     5.00
ANAL. DATE:       6/20/97
ANAL. INIT:       RD                       CYCLE LENGTH =  100
GROWTH FACTOR % :      0.0                 LOST TIME    =  0.100
-----------------------------------------------------------------------
LEG  PATTERN        LANE            APPROVED       PROJECT          TOTAL
                   COUNTS             TRIPS         TRIPS            TRIPS
     LSTSRO     LT   THRU   RT    LT  THRU  RT    LT  THRU  RT     LT  THRU   RT
 N   102010    128   560    79     0    0    0     0    0    0    128   560   79
 E   102010     72   326   296     0    0    0     1    0    0     73   326  296
 S   203010    181  2892    81     0    0    0     0    0    2    181  2892   83
 W   102010    174   172    69     0    0    0     0    0    0    174   172   69
=======================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./   ADJ.   C. CAP.
              L S T S R O                            LANE    G/C
=======================================================================
 N      1     1 0 0 0 0 0     128     1675   0.076   0.012   0.088     147
 E      2     0 0 2 0 0 0     326     3560   0.092   0.025   0.117     417
 S      3     0 0 3 0 0 0    2892     5340   0.542   0.037   0.579    3092
 W      1     1 0 0 0 0 0     174     1675   0.104   0.012   0.116     194
                                        LT = 0.100
TOTALS  7                    3520            0.914                    3850
                                    1 - 0.914 = 0.086 /  7 = 0.012
                                                             V/C = 0.914
                             EXISTING          LEVEL OF SERVICE =   E
-----------------------------------------------------------------------
 N      1     1 0 0 0 0 0     128     1675   0.076   0.012   0.088     147
 E      2     0 0 2 0 0 0     326     3560   0.092   0.025   0.117     417
 S      3     0 0 3 0 0 0    2892     5340   0.542   0.037   0.579    3092
 W      1     1 0 0 0 0 0     174     1675   0.104   0.012   0.116     194
                                        LT = 0.100
TOTALS  7                    3520            0.914                    3850
                                    1 - 0.914 = 0.086 /  7 = 0.012
                                                             V/C = 0.914
                         EXISTING + APPROVED    LEVEL OF SERVICE =   E
-----------------------------------------------------------------------
 N      1     1 0 0 0 0 0     128     1675   0.076   0.012   0.088     147
 E      2     0 0 2 0 0 0     326     3560   0.092   0.025   0.117     417
 S      3     0 0 3 0 0 0    2892     5340   0.542   0.037   0.579    3092
 W      1     1 0 0 0 0 0     174     1675   0.104   0.012   0.116     194
                                        LT = 0.100
TOTALS  7                    3520            0.914                    3850
                                    1 - 0.914 = 0.086 /  7 = 0.012
                                                             V/C = 0.914
                EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   E
=======================================================================
( 3520 - 3520 )/ 3520 =    0.00 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
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97-036

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                          LEVEL OF SERVICE ANALYSIS
==========================================================================
LOCATION:       SAN TOMAS & MOORPARK
MESSAGE:        CUMULATIVE CONDTIONS   SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:      AM                     N-S      45.00    5.00
COUNT DATE:     4/17/97                E-W      45.00    5.00
ANAL. DATE:     6/20/97
ANAL. INIT:     RD                     CYCLE LENGTH =  100
GROWTH FACTOR % :    0.0               LOST TIME    =  0.100
------------------------------------------------------------------------
LEG  PATTERN      LANE            APPROVED      PROJECT          TOTAL
                 COUNTS             TRIPS        TRIPS           TRIPS
     LSTSRO    LT   THRU   RT    LT THRU  RT   LT THRU RT     LT  THRU   RT
 N   102010   128   560    79    0    0    0    0   1   0    128   561   79
 E   102010    72   326   296    0    0    0    1   0   0     73   326  296
 S   203010   181  2892    81    0    0    0    0   2   2    181  2894   83
 W   102010   174   172    69    0    0    0    0   0   0    174   172   69
==========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C     ADJ./    ADJ.    C. CAP.
              L S T S R O                             LANE     G/C
==========================================================================
 N      1     1 0 0 0 0 0     128     1675    0.076   0.012   0.088     147
 E      2     0 0 2 0 0 0     326     3560    0.092   0.025   0.117     417
 S      3     0 0 3 0 0 0    2892     5340    0.542   0.037   0.579    3092
 W      1     1 0 0 0 0 0     174     1675    0.104   0.012   0.116     194
                                        LT = 0.100
TOTALS  7                    3520             0.914                    3850
                                    1 - 0.914 = 0.086 /  7 = 0.012
                                                              V/C = 0.914
                             EXISTING           LEVEL OF SERVICE =    E
--------------------------------------------------------------------------
 N      1     1 0 0 0 0 0     128     1675    0.076   0.012   0.088     147
 E      2     0 0 2 0 0 0     326     3560    0.092   0.025   0.117     417
 S      3     0 0 3 0 0 0    2892     5340    0.542   0.037   0.579    3092
 W      1     1 0 0 0 0 0     174     1675    0.104   0.012   0.116     194
                                        LT = 0.100
TOTALS  7                    3520             0.914                    3850
                                    1 - 0.914 = 0.086 /  7 = 0.012
                                                              V/C = 0.914
                         EXISTING + APPROVED    LEVEL OF SERVICE =    E
--------------------------------------------------------------------------
 N      1     1 0 0 0 0 0     128     1675    0.076   0.012   0.088     147
 E      2     0 0 2 0 0 0     326     3560    0.092   0.025   0.117     417
 S      3     0 0 3 0 0 0    2894     5340    0.542   0.037   0.579    3092
 W      1     1 0 0 0 0 0     174     1675    0.104   0.012   0.116     194
                                        LT = 0.100
TOTALS  7                    3522             0.914                    3850
                                    1 - 0.914 = 0.086 /  7 = 0.012
                                                              V/C = 0.915
                EXISTING + APPROVED + PROJECT   LEVEL OF SERVICE =    E
==========================================================================
( 3522 - 3520 )/ 3520 =   0.06 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

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                         LEVEL OF SERVICE ANALYSIS
===========================================================================
LOCATION:      SAN TOMAS & MOORPARK
MESSAGE:       PROJECT CONDITIONS      SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:     PM                      N-S      45.00    5.00
COUNT DATE:    10/96                   E-W      45.00    5.00
ANAL. DATE:    7/2/97
ANAL. INIT:    RD                      CYCLE LENGTH =  100
GROWTH FACTOR % :   3.0                LOST TIME    =  0.100
-------------------------------------------------------------------------
LEG  PATTERN      LANE             APPROVED     PROJECT          TOTAL
                 COUNTS              TRIPS       TRIPS            TRIPS
     LSTSRO    LT  THRU   RT     LT THRU  RT    LT THRU RT     LT  THRU   RT
 N   102010   309  2352  187      0    0   0     0   0   0    318  2423  193
 E   102010   143   315   95      0    0   0     7   0   0    154   324   98
 S   203010   112   878   86      0    0   0     0   0   7    115   904   96
 W   102010   119   430  203      0    0   0     0   0   0    123   443  209
=========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.    G/C    ADJ./    ADJ.   C. CAP.
             L S T S R O                              LANE     G/C
=========================================================================
 N       2    0 0 2 0 0 0    2352     3560    0.661   -.001   0.660    2350
 E       1    1 0 0 0 0 0     143     1675    0.085   -.001   0.084     141
 S       2    2 0 0 0 0 0     112     3015    0.037   -.001   0.036     109
 W       2    0 0 2 0 0 0     430     3560    0.121   -.001   0.120     427
                                         LT = 0.100
TOTALS   7                   3037             1.004                    3027
                                          1 - 1.004 = -.004 /  7 = -.001
                                                               V/C = 1.003
                             EXISTING           LEVEL OF SERVICE =   F
-------------------------------------------------------------------------
 N       2    0 0 2 0 0 0    2423     3560    0.681   -.009   0.672    2392
 E       1    1 0 0 0 0 0     147     1675    0.088   -.004   0.084     141
 S       2    2 0 0 0 0 0     115     3015    0.038   -.009   0.029      87
 W       2    0 0 2 0 0 0     443     3560    0.124   -.009   0.115     409
                                         LT = 0.100
TOTALS   7                   3128             1.031                    3029
                                          1 - 1.031 = -.031 /  7 = -.004
                                                               V/C = 1.033
                         EXISTING + APPROVED    LEVEL OF SERVICE =   F
-------------------------------------------------------------------------
 N       2    0 0 2 0 0 0    2423     3560    0.681   -.010   0.671    2389
 E       1    1 0 0 0 0 0     154     1675    0.092   -.005   0.087     146
 S       2    2 0 0 0 0 0     115     3015    0.038   -.010   0.028      84
 W       2    0 0 2 0 0 0     443     3560    0.124   -.010   0.114     406
                                         LT = 0.100
TOTALS   7                   3135             1.035                    3025
                                          1 - 1.035 = -.035 /  7 = -.005
                                                               V/C = 1.036
                  EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   F
=========================================================================
( 3135 - 3128 )/ 3128 =   0.22 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
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97-036

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                         LEVEL OF SERVICE ANALYSIS
============================================================================
LOCATION:      SAN TOMAS & MOORPARK
MESSAGE:       CUMULATIVE CONDTIONS   SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:     PM                     N-S      45.00    5.00
COUNT DATE:    10/96                  E-W      45.00    5.00
ANAL. DATE:    7/2/97
ANAL. INIT:    RD                     CYCLE LENGTH =  100
GROWTH FACTOR % :    3.0              LOST TIME    =  0.100
--------------------------------------------------------------------------
LEG  PATTERN      LANE            APPROVED      PROJECT          TOTAL
                 COUNTS            TRIPS         TRIPS           TRIPS
     LSTSRO    LT  THRU   RT     LT THRU  RT    LT THRU RT     LT  THRU   RT
 N   102010   309  2352  187      0    0   0     0    8   0   318  2431  193
 E   102010   143   315   95      0    0   0     7    0   0   154   324   98
 S   203010   112   878   86      0    0   0     0    8   7   115   912   96
 W   102010   119   430  203      0    0   0     0    0   0   123   443  209
==========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
              L S T S R O                            LANE     G/C
==========================================================================
 N      2     0 0 2 0 0 0    2352     3560    0.661   -.001   0.660    2350
 E      1     1 0 0 0 0 0     143     1675    0.085   -.001   0.084     141
 S      2     2 0 0 0 0 0     112     3015    0.037   -.001   0.036     109
 W      2     0 0 2 0 0 0     430     3560    0.121   -.001   0.120     427
                                         LT = 0.100
TOTALS  7                    3037              1.004                   3027
                                     1 - 1.004 = -.004 /  7 = -.001
                                                             V/C = 1.003
                                   EXISTING          LEVEL OF SERVICE =   F
--------------------------------------------------------------------------
 N      2     0 0 2 0 0 0    2423     3560    0.681   -.009   0.672    2392
 E      1     1 0 0 0 0 0     147     1675    0.088   -.004   0.084     141
 S      2     2 0 0 0 0 0     115     3015    0.038   -.009   0.029      87
 W      2     0 0 2 0 0 0     443     3560    0.124   -.009   0.115     409
                                         LT = 0.100
TOTALS  7                    3128              1.031                   3029
                                     1 - 1.031 = -.031 /  7 = -.004
                                                             V/C = 1.033
                         EXISTING + APPROVED     LEVEL OF SERVICE =   F
--------------------------------------------------------------------------
 N      2     0 0 2 0 0 0    2431     3560    0.683   -.011   0.672    2392
 E      1     1 0 0 0 0 0     154     1675    0.092   -.005   0.087     146
 S      2     2 0 0 0 0 0     115     3015    0.038   -.011   0.027      81
 W      2     0 0 2 0 0 0     443     3560    0.124   -.011   0.113     402
                                         LT = 0.100
TOTALS  7                    3143              1.037                   3021
                                     1 - 1.037 = -.037 /  7 = -.005
                                                             V/C = 1.040
               EXISTING + APPROVED + PROJECT     LEVEL OF SERVICE =   F
==========================================================================
( 3143 - 3128 )/ 3128 =   0.48 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

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                         LEVEL OF SERVICE ANALYSIS
======================================================================
LOCATION:       SAN TOMAS & STEVENS CREEK
MESSAGE:        PROJECT CONDITIONS     SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:      AM                     N-S     110.00    3.80
COUNT DATE:     4/17/97                E-W      70.00    8.50
ANAL. DATE:     7/2/97
ANAL. INIT:     RD                     CYCLE LENGTH =  197.3
GROWTH FACTOR % :    0.0               LOST TIME    =  0.088
---------------------------------------------------------------------
LEG  PATTERN      LANE           APPROVED     PROJECT          TOTAL
                 COUNTS            TRIPS       TRIPS            TRIPS
    LSTSRO     LT   THRU   RT    LT THRU  RT    LT THRU RT     LT  THRU   RT
 N  202010     92    552   45     0    0   0    24   0   0    116   552   45
 E  203010    111    729  124     0    2   0     0  24  44    111   755  168
 S  203010    261   2757   72     1    0   0     0   0   0    262  2757   72
 W  103010     98    431  109     0    4   2     0  14   0     98   449  111
=====================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
              L S T S R O                            LANE     G/C
=====================================================================
 N      2     2 0 0 0 0 0      92     3015    0.031   0.038   0.069     208
 E      3     0 0 3 0 0 0     729     5340    0.137   0.056   0.193    1031
 S      3     0 0 3 0 0 0    2757     5340    0.516   0.056   0.572    3054
 W      1     1 0 0 0 0 0      98     1675    0.059   0.019   0.078     131
                                          LT = 0.088
TOTALS  9                    3676             0.831                    4424
                                       1 - 0.831 = 0.169 /  9 = 0.019
                                                             V/C = 0.831
                             EXISTING             LEVEL OF SERVICE =   D
---------------------------------------------------------------------
 N      2     2 0 0 0 0 0      92     3015    0.031   0.038   0.069     208
 E      3     0 0 3 0 0 0     731     5340    0.137   0.056   0.193    1031
 S      3     0 0 3 0 0 0    2757     5340    0.516   0.056   0.572    3054
 W      1     1 0 0 0 0 0      98     1675    0.059   0.019   0.078     131
                                          LT = 0.088
TOTALS  9                    3678             0.831                    4424
                                       1 - 0.831 = 0.169 /  9 = 0.019
                                                             V/C = 0.831
                         EXISTING + APPROVED      LEVEL OF SERVICE =   D
---------------------------------------------------------------------
 N      2     2 0 0 0 0 0     116     3015    0.038   0.035   0.073     220
 E      3     0 0 3 0 0 0     755     5340    0.141   0.053   0.194    1036
 S      3     0 0 3 0 0 0    2757     5340    0.516   0.053   0.569    3038
 W      1     1 0 0 0 0 0      98     1675    0.059   0.018   0.077     129
                                          LT = 0.088
TOTALS  9                    3726             0.842                    4423
                                       1 - 0.842 = 0.158 /  9 = 0.018
                                                             V/C = 0.842
                 EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   D
=====================================================================
( 3726 - 3678 )/ 3678 =   1.31 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                          LEVEL OF SERVICE ANALYSIS
==========================================================================
LOCATION:        SAN TOMAS & STEVENS CREEK
MESSAGE:         CUMULATIVE CONDTIONS    SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:       AM                      N-S      110.00    8.80
COUNT DATE:      4/17/97                 E-W       70.00    8.50
ANAL. DATE:      7/2/97
ANAL. INIT:      RD                      CYCLE LENGTH =  197.3
GROWTH FACTOR % :     0.0                LOST TIME    =  0.088
-------------------------------------------------------------------------
LEG  PATTERN      LANE              APPROVED     PROJECT            TOTAL
                 COUNTS               TRIPS        TRIPS              TRIPS
     LSTSRO     LT   THRU    RT    LT  THRU  RT   LT  THRU  RT    LT  THRU   RT
 N   202010     74    442    36     0    0    0   28    0    0   102   442   36
 E   203010    111    729   124     0    2    0    1   26   47   112   757  171
 S   203010    261   2757    72     1    0    0    0    0    2   262  2757   74
 W   103010     98    431   109     0    4    2    0   17    0    98   452  111
=========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
             L S T S R O                               LANE    G/C
=========================================================================
 N     2     2 0 0 0 0 0      74     3015    0.025   0.039   0.064     193
 E     3     0 0 3 0 0 0     729     5340    0.137   0.058   0.195    1041
 S     3     0 0 3 0 0 0    2757     5340    0.516   0.058   0.574    3065
 W     1     1 0 0 0 0 0      98     1675    0.059   0.019   0.078     131
                                         LT = 0.088
TOTALS 9                    3658             0.825                    4430
                                     1 - 0.825 = 0.175 /  9 = 0.019
                                                            V/C = 0.826
                                  EXISTING          LEVEL OF SERVICE =   D
-------------------------------------------------------------------------
 N     2     2 0 0 0 0 0      74     3015    0.025   0.039   0.064     193
 E     3     0 0 3 0 0 0     731     5340    0.137   0.058   0.195    1041
 S     3     0 0 3 0 0 0    2757     5340    0.516   0.058   0.574    3065
 W     1     1 0 0 0 0 0      98     1675    0.059   0.019   0.078     131
                                         LT = 0.088
TOTALS 9                    3660             0.825                    4430
                                     1 - 0.825 = 0.175 /  9 = 0.019
                                                            V/C = 0.826
                            EXISTING + APPROVED     LEVEL OF SERVICE =   D
-------------------------------------------------------------------------
 N     2     2 0 0 0 0 0     102     3015    0.034   0.036   0.070     211
 E     3     0 0 3 0 0 0     757     5340    0.142   0.054   0.196    1047
 S     3     0 0 3 0 0 0    2757     5340    0.516   0.054   0.570    3044
 W     1     1 0 0 0 0 0      98     1675    0.059   0.018   0.077     129
                                         LT = 0.088
TOTALS 9                    3714             0.839                    4431
                                     1 - 0.839 = 0.161 /  9 = 0.018
                                                            V/C = 0.838
                   EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   D
=========================================================================
( 3714 - 3660 )/ 3660 =   1.48 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                         LEVEL OF SERVICE ANALYSIS
=========================================================================
LOCATION:      SAN TOMAS & STEVENS CREEK
MESSAGE:       PROJECT CONDITIONS     SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:     PM                     N-S     110.00    8.80
COUNT DATE:    7/9/97                 E-W      70.00    8.50
ANAL. DATE:    7/2/97 .
ANAL. INIT:    RD                     CYCLE LENGTH =  197.3
GROWTH FACTOR % :     0.0             LOST TIME    =  0.088
-------------------------------------------------------------------------
LEG  PATTERN      LANE            APPROVED     PROJECT          TOTAL
                 COUNTS            TRIPS        TRIPS           TRIPS
     LSTSRO     LT  THRU   RT    LT THRU  RT    LT THRU RT    LT  THRU  RT
 N   202010    321  2153  126     0    0   0    58   0   0   379  2153 126
 E   203010    283   915  171     0    4   0     0  27  42   283   946 213
 S   203010    190   674  182     2    0   0     0   0   0   192   674 182
 W   103010     60   955  370     0    2   1     0  35   0    60   992 371
=========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C     ADJ./    ADJ.   C. CAP.
               L S T S R O                             LANE    G/C
=========================================================================
 N      2     0 0 2 0 0 0    2153     3560   0.605   -.006   0.599    2132
 E      2     2 0 0 0 0 0     283     3015   0.094   -.006   0.088     265
 S      2     2 0 0 0 0 0     190     3015   0.063   -.006   0.057     172
 W      3     0 0 3 0 0 0     955     5340   0.179   -.010   0.169     902
                                           LT = 0.088
TOTALS  9                    3581                1.029                3471
                                      1 - 1.029 = -.029 /  9 = -.003
                                                              V/C = 1.032
                                   EXISTING         LEVEL OF SERVICE =   F
-------------------------------------------------------------------------
 N      2     0 0 2 0 0 0    2153     3560   0.605   -.007   0.598    2129
 E      2     2 0 0 0 0 0     283     3015   0.094   -.007   0.087     262
 S      2     2 0 0 0 0 0     192     3015   0.064   -.007   0.057     172
 W      3     0 0 3 0 0 0     957     5340   0.179   -.010   0.169     902
                                           LT = 0.088
TOTALS  9                    3585                1.030                3465
                                      1 - 1.030 = -.030 /  9 = -.003
                                                              V/C = 1.035
                         EXISTING + APPROVED    LEVEL OF SERVICE =   F
-------------------------------------------------------------------------
 N      2     0 0 2 0 0 0    2153     3560   0.605   -.008   0.597    2125
 E      2     2 0 0 0 0 0     283     3015   0.094   -.008   0.086     259
 S      2     2 0 0 0 0 0     192     3015   0.064   -.008   0.056     169
 W      3     0 0 3 0 0 0     992     5340   0.186   -.012   0.174     929
                                           LT = 0.088
TOTALS  9                    3620                1.037                3482
                                      1 - 1.037 = -.037 /  9 = -.004
                                                              V/C = 1.040
                  EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   F
=========================================================================
( 3620 - 3585 )/ 3585 =    0.98 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                       LEVEL OF SERVICE ANALYSIS
=========================================================================
LOCATION:       SAN TOMAS & STEVENS CREEK
MESSAGE:        CUMULATIVE CONDITIONS  SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:      PM                     N-S     110.00    8.80
COUNT DATE:     7/9/97                 E-W      70.00    8.50
ANAL. DATE:     7/2/97
ANAL. INIT:     RD                     CYCLE LENGTH =  197.3
GROWTH FACTOR % :    0.0               LOST TIME    =  0.088
-----------------------------------------------------------------------
LEG  PATTERN       LANE              APPROVED     PROJECT          TOTAL
                  COUNTS               TRIPS        TRIPS           TRIPS
     LSTSRO     LT  THRU   RT      LT THRU  RT    LT THRU RT      LT  THRU   RT
 N   202010    321  2153  126       0    0   0    74    0  0     395  2153  126
 E   203010    283   915  171       0    4   0     8   40 48     291   959  219
 S   203010    190   674  182       2    0   0     0    0  8     192   674  190
 W   103010     60   955  370       0    2   1     0   48  0      60  1005  371
=======================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
              L S T S R O                            LANE     G/C
=======================================================================
 N       2    0 0 2 0 0 0    2153     3560    0.605   -.006   0.599    2132
 E       2    2 0 0 0 0 0     283     3015    0.094   -.006   0.088     265
 S       2    2 0 0 0 0 0     190     3015    0.063   -.006   0.057     172
 W       3    0 0 3 0 0 0     955     5340    0.179   -.010   0.169     902
                                         LT = 0.088
TOTALS   9                   3581             1.029                    3471
                                       1 - 1.029 = -.029 /  9 = -.003
                                                            V/C = 1.032
                                 EXISTING          LEVEL OF SERVICE =   F
-----------------------------------------------------------------------
 N       2    0 0 2 0 0 0    2153     3560    0.605   -.007   0.598    2129
 E       2    2 0 0 0 0 0     283     3015    0.094   -.007   0.087     262
 S       2    2 0 0 0 0 0     192     3015    0.064   -.007   0.057     172
 W       3    0 0 3 0 0 0     957     5340    0.179   -.010   0.169     902
                                         LT = 0.088
TOTALS   9                   3585             1.030                    3465
                                       1 - 1.030 = -.030 /  9 = -.003
                                                            V/C = 1.035
                             EXISTING + APPROVED    LEVEL OF SERVICE =   F
-----------------------------------------------------------------------
 N       2    0 0 2 0 0 0    2153     3560    0.605   -.009   0.596    2122
 E       2    2 0 0 0 0 0     291     3015    0.097   -.009   0.088     265
 S       2    2 0 0 0 0 0     192     3015    0.064   -.009   0.055     166
 W       3    0 0 3 0 0 0    1005     5340    0.188   -.014   0.174     929
                                         LT = 0.088
TOTALS   9                   3641             1.042                    3482
                                       1 - 1.042 = -.042 /  9 = -.005
                                                            V/C = 1.046
                   EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   F
=======================================================================
( 3641 - 3585 )/ 3585 =   1.56 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
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97-036

```
                         LEVEL OF SERVICE ANALYSIS
=========================================================================
LOCATION:       WINCHESTER & MOORPARK
MESSAGE:        PROJECT CONDITIONS      SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:      AM                      N-S      52.50    8.50
COUNT DATE:     10/1/97                 E-W      55.00   10.00
ANAL. DATE:     7/2/97
ANAL. INIT:     RD                      CYCLE LENGTH =  126
GROWTH FACTOR % :     0.0               LOST TIME    =  0.147
-----------------------------------------------------------------------
LEG  PATTERN       LANE            APPROVED     PROJECT          TOTAL
                  COUNTS             TRIPS       TRIPS           TRIPS
     LSTSRO     LT   THRU   RT    LT THRU  RT   LT THRU RT     LT  THRU   RT
 N   103010     97   239    86     3   18  39    0   3   1 .  100   260  126
 E   111010    482   413   149     0    6   3    0   0   1    482   419  153
 S   103010     70  1608   286     9   38   0    0   5   0     79  1651  286
 W   111010    542   539   156    12    1   3   58   0   0    612   540  159
=======================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.    G/C     ADJ./    ADJ.   C. CAP.
               L S T S R O                              LANE     G/C
=======================================================================
 N      1     1 0 0 0 0 0      97     1675    0.058    0.009   0.067     112
 E      3     1 1 1 0 0 0     895     4913    0.182    0.028   0.210    1032
 S      3     0 0 3 0 0 0    1608     5340    0.301    0.028   0.329    1757
 W      3     1 1 1 0 0 0    1081     4923    0.220    0.028   0.248    1221
                                         LT = 0.147
TOTALS 10                    3681             0.908                     4122
                                     1 - 0.908 = 0.092 / 10 = 0.009
                                                           V/C = 0.893
                             EXISTING           LEVEL OF SERVICE =   D
-----------------------------------------------------------------------
 N      1     1 0 0 0 0 0     100     1675    0.060    0.008   0.068     114
 E      3     1 1 1 0 0 0     901     4914    0.183    0.024   0.207    1017
 S      3     0 0 3 0 0 0    1646     5340    0.308    0.024   0.332    1773
 W      3     1 1 1 0 0 0    1094     4921    0.222    0.024   0.246    1211
                                         LT = 0.147
TOTALS 10                    3741             0.920                     4115
                                     1 - 0.920 = 0.080 / 10 = 0.008
                                                           V/C = 0.909
                         EXISTING + APPROVED    LEVEL OF SERVICE =   E
-----------------------------------------------------------------------
 N      1     1 0 0 0 0 0     100     1675    0.060    0.007   0.067     112
 E      3     1 1 1 0 0 0     901     4914    0.183    0.020   0.203     998
 S      3     0 0 3 0 0 0    1651     5340    0.309    0.020   0.329    1757
 W      3     1 1 1 0 0 0    1152     4915    0.234    0.020   0.254    1248
                                         LT = 0.147
TOTALS 10                    3804             0.933                     4115
                                     1 - 0.933 = 0.067 / 10 = 0.007
                                                           V/C = 0.924
                 EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   E
=======================================================================
( 3804 - 3741 )/ 3741 =    1.68 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

```
                         LEVEL OF SERVICE ANALYSIS
============================================================================
LOCATION:         WINCHESTER & MOORPARK
MESSAGE:          PROJECT CONDITIONS      SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:        AM      MITIGATION      N-S       52.50    8.50
COUNT DATE:       10/1/97                 E-W       55.00   10.00
ANAL. DATE:       7/2/97
ANAL. INIT:       RD                      CYCLE LENGTH =  126
GROWTH FACTOR % :     0.0                 LOST TIME    =  0.147
--------------------------------------------------------------------------
LEG  PATTERN      LANE              APPROVED     PROJECT            TOTAL
                 COUNTS               TRIPS       TRIPS             TRIPS
     LSTSRO     LT   THRU   RT     LT THRU  RT   LT THRU RT     LT  THRU  RT
 N   103010     97    239   86      3   18  39    0   3   1    100   260  126
 E   202010    482    413  149      0    6   3    0   0   1    482   419  153
 S   103010     70   1608  286      9   38   0    0   5   0     79  1651  286
 W   202010    542    539  156     12    1   3   58   0   0    612   540  159
==========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.    C. CAP.
               L S T S R O                            LANE     G/C
==========================================================================
 N      1     1 0 0 0 0 C      97     1675   0.058   0.023   0.081      136
 E      2     2 0 0 0 0 C     482     3015   0.160   0.046   0.206      621
 S      3     0 0 3 0 0 C    1608     5340   0.301   0.069   0.370     1976
 W      2     0 0 2 0 0 0     539     3560   0.151   0.046   0.197      701
                                        LT = 0.147
TOTALS  8                    2726            0.817                    3434
                                      1 - 0.817 = 0.183 /  8 = 0.023
                                                             V/C = 0.794
                                EXISTING           LEVEL OF SERVICE =   C
--------------------------------------------------------------------------
 N      1     1 0 0 0 0 0     100     1675   0.060   0.022   0.082      137
 E      2     2 0 0 0 0 0     482     3015   0.160   0.043   0.203      612
 S      3     0 0 3 0 0 0    1646     5340   0.308   0.065   0.373     1992
 W      2     0 0 2 0 0 0     540     3560   0.152   0.043   0.195      694
                                        LT = 0.147
TOTALS  8                    2768            0.827                    3435
                                      1 - 0.827 = 0.173 /  8 = 0.022
                                                             V/C = 0.806
                            EXISTING + APPROVED    LEVEL OF SERVICE =   D
--------------------------------------------------------------------------
 N      1     1 0 0 0 0 0     100     1675   0.060   0.020   0.080      134
 E      2     0 0 2 0 0 0     419     3560   0.118   0.041   0.159      566
 S      3     0 0 3 0 0 0    1651     5340   0.309   0.061   0.370     1976
 W      2     2 0 0 0 0 0     612     3015   0.203   0.041   0.244      736
                                        LT = 0.147
TOTALS  8                    2782            0.837                    3412
                                      1 - 0.837 = 0.163 /  8 = 0.020
                                                             V/C = 0.815
                 EXISTING + APPROVED + PROJECT     LEVEL OF SERVICE =   D
==========================================================================
( 2782 - 2768 )/ 2768 =    0.51 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                         LEVEL OF SERVICE ANALYSIS
=====================================================================
LOCATION:     WINCHESTER & MOORPARK
MESSAGE:      CUMULATIVE CONDTIONS     SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:    AM                       N-S      52.50    8.50
COUNT DATE:   10/1/97                  E-W      55.00   10.00
ANAL. DATE:   7/2/97
ANAL. INIT:   RD                       CYCLE LENGTH =  126
GROWTH FACTOR % :    0.0               LOST TIME    =  0.147
--------------------------------------------------------------------
LEG  PATTERN      LANE          APPROVED    PROJECT          TOTAL
                 COUNTS           TRIPS       TRIPS           TRIPS
     LSTSRO    LT  THRU   RT    LT THRU RT   LT THRU RT     LT  THRU   RT
 N   103010    97   239   86     3   18  39   1    5   1    101   262  126
 E   111010   482   413  149     0    6   3   0    0   2    482   419  154
 S   103010    70  1608  286     9   38   0   0   10   0     79  1656  286
 W   111010   542   539  156    12    1   3  63    0   0    617   540  159
====================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
               L S T S R O                            LANE     G/C
====================================================================
 N      1     1 0 0 0 0 0     97     1675    0.058   0.009   0.067    112
 E      3     1 1 1 0 0 0    895     4913    0.182   0.028   0.210   1032
 S      3     0 0 3 0 0 0   1608     5340    0.301   0.028   0.329   1757
 W      3     1 1 1 0 0 0   1081     4923    0.220   0.028   0.248   1221
                                        LT = 0.147
TOTALS 10                   3681             0.908                   4122
                                     1 - 0.908 = 0.092 / 10 = 0.009
                                                          V/C = 0.893
                              EXISTING          LEVEL OF SERVICE =   D
--------------------------------------------------------------------
 N      1     1 0 0 0 0 0    100     1675    0.060   0.008   0.068    114
 E      3     1 1 1 0 0 0    901     4914    0.183   0.024   0.207   1017
 S      3     0 0 3 0 0 0   1646     5340    0.308   0.024   0.332   1773
 W      3     1 1 1 0 0 0   1094     4921    0.222   0.024   0.246   1211
                                        LT = 0.147
TOTALS 10                   3741             0.920                   4115
                                     1 - 0.920 = 0.080 / 10 = 0.008
                                                          V/C = 0.909
                          EXISTING + APPROVED   LEVEL OF SERVICE =   E
--------------------------------------------------------------------
 N      1     1 0 0 0 0 0    101     1675    0.060   0.006   0.066    111
 E      3     1 1 1 0 0 0    901     4914    0.183   0.019   0.202    993
 S      3     0 0 3 0 0 0   1656     5340    0.310   0.019   0.329   1757
 W      3     1 1 1 0 0 0   1157     4914    0.235   0.019   0.254   1248
                                        LT = 0.147
TOTALS 10                   3815             0.935                   4109
                                     1 - 0.935 = 0.065 / 10 = 0.006
                                                          V/C = 0.928
               EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   E
====================================================================
( 3815 - 3741 )/ 3741 =   1.98 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

```
                           LEVEL OF SERVICE ANALYSIS
==============================================================================
LOCATION:        WINCHESTER & MOORPARK
MESSAGE:         CUMULATIVE CONDTIONS     SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:       AM     MITIGATION        N-S      52.50    8.50
COUNT DATE:      10/1/97                  E-W      55.00   10.00
ANAL. DATE:      7/2/97
ANAL. INIT:      RD                       CYCLE LENGTH =  126
GROWTH FACTOR % :     0.0                 LOST TIME    = 0.147
----------------------------------------------------------------------------
LEG  PATTERN      LANE           APPROVED     PROJECT          TOTAL
                 COUNTS            TRIPS       TRIPS           TRIPS
     LSTSRO    LT  THRU   RT    LT THRU  RT   LT THRU RT     LT  THRU   RT
 N   103010    97   239   86     3   18  39    1   5   1    101   262  126
 E   202010   482   413  149     0    6   3    0   0   2    482   419  154
 S   103010    70  1608  286     9   38   0    0  10   0     79  1656  286
 W   202010   542   539  156    12    1   3   63   0   0    617   540  159
============================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
              L S T S R O                             LANE     G/C
============================================================================
 N      1     1 0 0 0 0 0      97     1675   0.058   0.023   0.081     136
 E      2     2 0 0 0 0 0     482     3015   0.160   0.046   0.206     621
 S      3     0 0 3 0 0 0    1608     5340   0.301   0.069   0.370    1976
 W      2     0 0 2 0 0 0     539     3560   0.151   0.046   0.197     701
                                          LT = 0.147
TOTALS  8                    2726             0.817                    3434
                                     1 - 0.817 = 0.183 /  8 = 0.023
                                                              V/C = 0.794
                                  EXISTING          LEVEL OF SERVICE =   C
----------------------------------------------------------------------------
 N      1     1 0 0 0 0 0     100     1675   0.060   0.022   0.082     137
 E      2     2 0 0 0 0 0     482     3015   0.160   0.043   0.203     612
 S      3     0 0 3 0 0 0    1646     5340   0.308   0.065   0.373    1992
 W      2     0 0 2 0 0 0     540     3560   0.152   0.043   0.195     694
                                          LT = 0.147
TOTALS  8                    2768             0.827                    3435
                                     1 - 0.827 = 0.173 /  8 = 0.022
                                                              V/C = 0.806
                         EXISTING + APPROVED        LEVEL OF SERVICE =   D
----------------------------------------------------------------------------
 N      1     1 0 0 0 0 0     101     1675   0.060   0.020   0.080     134
 E      2     0 0 2 0 0 0     419     3560   0.118   0.040   0.158     562
 S      3     0 0 3 0 0 0    1656     5340   0.310   0.060   0.370    1976
 W      2     2 0 0 0 0 0     617     3015   0.205   0.040   0.245     739
                                          LT = 0.147
TOTALS  8                    2793             0.840                    3411
                                     1 - 0.840 = 0.160 /  8 = 0.020
                                                              V/C = 0.819
               EXISTING + APPROVED + PROJECT        LEVEL OF SERVICE =   D
============================================================================
( 2793 - 2768 )/ 2768 =    0.90 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 8A
```

97-036

```
                         LEVEL OF SERVICE ANALYSIS
==========================================================================
LOCATION:         WINCHESTER & MOORPARK
MESSAGE:          PROJECT CONDITIONS     SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:        PM                     N-S      52.50    8.50
COUNT DATE:       7/10/97                E-W      55.00   10.00
ANAL. DATE:       7/2/97
ANAL. INIT:       RD                     CYCLE LENGTH =  126
GROWTH FACTOR % :    0.0                 LOST TIME    =  0.147
------------------------------------------------------------------------
LEG  PATTERN      LANE            APPROVED      PROJECT          TOTAL
                 COUNTS             TRIPS        TRIPS            TRIPS
     LSTSRO    LT   THRU   RT    LT THRU  RT    LT THRU RT      LT  THRU   RT
 N   103010   210   1252  197     3   58  12     2   19  9     215  1329  218
 E   111010   310    336  305     0    1   3     0    0  2     310   337  310
 S   103010    76    713  355     3   38   0     0   19  0      79   770  355
 W   111010   507    689  475    44    6   9   133    0  0     684   695  484
========================================================================
LEG  # LANES  CRIT. MOVE    C. VOL.   T. CAP.    G/C      ADJ./    ADJ.    C. CAP.
               L S T S R O                                 LANE     G/C
========================================================================
 N      3     0 0 3 0 0 0    1252      5340     0.234    0.060    0.294    1570
 E      3     1 1 1 0 0 0     646      4928     0.131    0.060    0.191     941
 S      1     1 0 0 0 0 0      76      1675     0.045    0.020    0.065     109
 W      3     1 1 1 0 0 0    1196      4944     0.242    0.060    0.302    1493
                                          LT = 0.147
TOTALS 10                    3170               0.799                       4113
                                   1 - 0.799 = 0.201 / 10 = 0.020
                                                               V/C = 0.771
                              EXISTING           LEVEL OF SERVICE =    C
------------------------------------------------------------------------
 N      3     0 0 3 0 0 0    1310      5340     0.245    0.053    0.298    1591
 E      3     1 1 1 0 0 0     647      4929     0.131    0.053    0.184     907
 S      1     1 0 0 0 0 0      79      1675     0.047    0.018    0.065     109
 W      3     1 1 1 0 0 0    1246      4939     0.252    0.053    0.305    1506
                                          LT = 0.147
TOTALS 10                    3282               0.822                       4113
                                   1 - 0.822 = 0.178 / 10 = 0.018
                                                               V/C = 0.798
                         EXISTING + APPROVED     LEVEL OF SERVICE =    C
------------------------------------------------------------------------
 N      3     0 0 3 0 0 0    1329      5340     0.249    0.044    0.293    1565
 E      3     1 1 1 0 0 0     647      4929     0.131    0.044    0.175     863
 S      1     1 0 0 0 0 0      79      1675     0.047    0.015    0.062     104
 W      3     1 1 1 0 0 0    1379      4924     0.280    0.044    0.324    1595
                                          LT = 0.147
TOTALS 10                    3434               0.854                       4127
                                   1 - 0.854 = 0.146 / 10 = 0.015
                                                               V/C = 0.832
                  EXISTING + APPROVED + PROJECT  LEVEL OF SERVICE =    D
========================================================================
( 3434 - 3282 )/ 3282 =   4.63 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                          LEVEL OF SERVICE ANALYSIS
===========================================================================
LOCATION:       WINCHESTER & MOORPARK
MESSAGE:        CUMULATIVE CONDITIONS  SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:      PM                     N-S      52.50    8.50
COUNT DATE:     7/10/97                E-W      55.00   10.00
ANAL. DATE:     7/2/97
ANAL. INIT:     RD                     CYCLE LENGTH =  126
GROWTH FACTOR % :     0.0              LOST TIME    =  0.147
-------------------------------------------------------------------------
LEG  PATTERN       LANE              APPROVED      PROJECT          TOTAL
                  COUNTS              TRIPS         TRIPS           TRIPS
     LSTSRO     LT   THRU   RT     LT THRU  RT    LT THRU  RT     LT  THRU   RT
 N   103010    210   1252  197      3   58  12     6   34   9    219  1344  218
 E   111010    310    336  305      0    1   3     0    0   6    310   337  314
 S   103010     76    713  355      3   38   0     0   34   0     79   785  355
 W   111010    507    689  475     44    6   9   151    0   0    702   695  484
=========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
              L S T S R O                            LANE     G/C
=========================================================================
 N      3     0 0 3 0 0 0   1252     5340    0.234   0.060   0.294    1570
 E      3     1 1 1 0 0 0    646     4928    0.131   0.060   0.191     941
 S      1     1 0 0 0 0 0     76     1675    0.045   0.020   0.065     109
 W      3     1 1 1 0 0 0   1196     4944    0.242   0.060   0.302    1493
                                        LT = 0.147
TOTALS 10                   3170             0.799                    4113
                                          1 - 0.799 = 0.201 / 10 = 0.020
                                                             V/C = 0.771
                                  EXISTING         LEVEL OF SERVICE =   C
-------------------------------------------------------------------------
 N      3     0 0 3 0 0 0   1310     5340    0.245   0.053   0.298    1591
 E      3     1 1 1 0 0 0    647     4929    0.131   0.053   0.184     907
 S      1     1 0 0 0 0 0     79     1675    0.047   0.018   0.065     109
 W      3     1 1 1 0 0 0   1246     4939    0.252   0.053   0.305    1506
                                        LT = 0.147
TOTALS 10                   3282             0.822                    4113
                                          1 - 0.822 = 0.178 / 10 = 0.018
                                                             V/C = 0.798
                              EXISTING + APPROVED    LEVEL OF SERVICE =   C
-------------------------------------------------------------------------
 N      3     0 0 3 0 0 0   1344     5340    0.252   0.042   0.294    1570
 E      3     1 1 1 0 0 0    647     4929    0.131   0.042   0.173     853
 S      1     1 0 0 0 0 0     79     1675    0.047   0.014   0.061     102
 W      3     1 1 1 0 0 0   1397     4922    0.284   0.042   0.326    1605
                                        LT = 0.147
TOTALS 10                   3467             0.861                    4130
                                          1 - 0.861 = 0.139 / 10 = 0.014
                                                             V/C = 0.839
                  EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   D
=========================================================================
( 3467 - 3282 )/ 3282 =   5.64 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                                 LEVEL OF SERVICE ANALYSIS
===========================================================================
LOCATION:       SARATOGA & STEVENS CREEK
MESSAGE:        PROJECT CONDITIONS      SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:      AM                      N-S      49.50     8.50
COUNT DATE:     5/21/96                 E-W      53.00     9.00
ANAL. DATE:     7/2/97
ANAL. INIT:     RD                      CYCLE LENGTH =  120
GROWTH FACTOR % :     4.5               LOST TIME    =  0.146
-------------------------------------------------------------------------
LEG  PATTERN       LANE            APPROVED      PROJECT          TOTAL
                  COUNTS             TRIPS         TRIPS            TRIPS
     LSTSRO     LT   THRU    RT    LT THRU  RT    LT THRU RT      LT   THRU   RT
 N   102010     61   397.    85     0    0   1     0   0   0      64    415   90
 E   103010    121   782     41     0    3   0     0  24   0     126    844   43
 S   102010    240   920    155     0    0   0     0   0   0     251    961  162
 W   103010     92   313     88     3    6   0     0  14   0      99    347   92
=========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C     ADJ./    ADJ.   C. CAP.
               L S T S R O                            LANE     G/C
=========================================================================
 N      1     1 0 0 0 0 0     61     1675    0.036   0.051   0.087     146
 E      3     0 0 3 0 0 0    782     5340    0.146   0.154   0.300    1602
 S      2     0 0 2 0 0 0    920     3560    0.258   0.103   0.361    1285
 W      1     1 0 0 0 0 0     92     1675    0.055   0.051   0.106     178
                                           LT = 0.146
TOTALS  7                   1855                 0.641                  3211
                                         1 - 0.641 = 0.359 /  7 = 0.051
                                                              V/C = 0.578
                                 EXISTING           LEVEL OF SERVICE =   A
-------------------------------------------------------------------------
 N      1     1 0 0 0 0 0     64     1675    0.038   0.048   0.086     144
 E      3     0 0 3 0 0 0    820     5340    0.154   0.143   0.297    1586
 S      2     0 0 2 0 0 0    961     3560    0.270   0.095   0.365    1299
 W      1     1 0 0 0 0 0     99     1675    0.059   0.048   0.107     179
                                           LT = 0.146
TOTALS  7                   1944                 0.667                  3208
                                         1 - 0.667 = 0.333 /  7 = 0.048
                                                              V/C = 0.606
                             EXISTING + APPROVED    LEVEL OF SERVICE =   B
-------------------------------------------------------------------------
 N      1     1 0 0 0 0 0     64     1675    0.038   0.047   0.085     142
 E      3     0 0 3 0 0 0    844     5340    0.158   0.141   0.299    1597
 S      2     0 0 2 0 0 0    961     3560    0.270   0.094   0.364    1296
 W      1     1 0 0 0 0 0     99     1675    0.059   0.047   0.106     178
                                           LT = 0.146
TOTALS  7                   1968                 0.671                  3213
                                         1 - 0.671 = 0.329 /  7 = 0.047
                                                              V/C = 0.613
                  EXISTING + APPROVED + PROJECT     LEVEL OF SERVICE =   B
=========================================================================
( 1968 - 1944 )/ 1944 =    1.23 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                         LEVEL OF SERVICE ANALYSIS
=======================================================================
LOCATION:       SARATOGA & STEVENS CREEK
MESSAGE:        CUMULATIVE CONDITIONS  SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:      AM                     N-S      49.50    8.50
COUNT DATE:     5/21/96                E-W      53.00    9.00
ANAL. DATE:     7/2/97
ANAL. INIT:     RD                     CYCLE LENGTH =  120
GROWTH FACTOR % :    4.5               LOST TIME    =  0.146
----------------------------------------------------------------------
LEG  PATTERN      LANE            APPROVED     PROJECT         TOTAL
                 COUNTS             TRIPS       TRIPS          TRIPS
     LSTSRO    LT  THRU   RT    LT THRU  RT   LT THRU RT    LT  THRU   RT
 N   102010    61   397   85     0    0   1    0   0   0    64   415   90
 E   103010   121   782   41     0    3   0    0  26   0   126   846   43
 S   102010   240   920  155     0    0   0    0   0   0   251   961  162
 W   103010    92   313   88     3    6   0    0  17   0    99   350   92
======================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
              L S T S R O                             LANE     G/C
======================================================================
 N      1     1 0 0 0 0 0      61     1675   0.036   0.051   0.087     146
 E      3     0 0 3 0 0 0     782     5340   0.146   0.154   0.300    1602
 S      2     0 0 2 0 0 0     920     3560   0.258   0.103   0.361    1285
 W      1     1 0 0 0 0 0      92     1675   0.055   0.051   0.106     178
                                       LT = 0.146
TOTALS  7                    1855            0.641                    3211
                                   1 - 0.641 = 0.359 /  7 = 0.051
                                                           V/C = 0.578
                                EXISTING          LEVEL OF SERVICE =   A
----------------------------------------------------------------------
 N      1     1 0 0 0 0 0      64     1675   0.038   0.048   0.086     144
 E      3     0 0 3 0 0 0     820     5340   0.154   0.143   0.297    1586
 S      2     0 0 2 0 0 0     961     3560   0.270   0.095   0.365    1299
 W      1     1 0 0 0 0 0      99     1675   0.059   0.048   0.107     179
                                       LT = 0.146
TOTALS  7                    1944            0.667                    3208
                                   1 - 0.667 = 0.333 /  7 = 0.048
                                                           V/C = 0.606
                         EXISTING + APPROVED      LEVEL OF SERVICE =   B
----------------------------------------------------------------------
 N      1     1 0 0 0 0 0      64     1675   0.038   0.047   0.085     142
 E      3     0 0 3 0 0 0     846     5340   0.158   0.141   0.299    1597
 S      2     0 0 2 0 0 0     961     3560   0.270   0.094   0.364    1296
 W      1     1 0 0 0 0 0      99     1675   0.059   0.047   0.106     178
                                       LT = 0.146
TOTALS  7                    1970            0.671                    3213
                                   1 - 0.671 = 0.329 /  7 = 0.047
                                                           V/C = 0.613
                  EXISTING + APPROVED + PROJECT   LEVEL OF SERVICE =   B
======================================================================
( 1970 - 1944 )/ 1944 =   1.34 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                              LEVEL OF SERVICE ANALYSIS
==============================================================================
LOCATION:       SARATOGA & STEVENS CREEK
MESSAGE:        PROJECT CONDITIONS      SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:      PM                      N-S      49.50    8.50
COUNT DATE:     10/96                   E-W      53.00    9.00
ANAL. DATE:     7/2/97
ANAL. INIT:     RD                      CYCLE LENGTH =  120
GROWTH FACTOR % :    3.0                LOST TIME    =  0.146
---------------------------------------------------------------------------
LEG  PATTERN       LANE              APPROVED      PROJECT          TOTAL
                  COUNTS              TRIPS         TRIPS           TRIPS
     LSTSRO     LT   THRU   RT     LT THRU  RT    LT THRU RT     LT  THRU   RT
 N   102010    141   851   148     0    0    3     0   0   0    145   877  155
 E   103010    203   727    51     0    6    0     0  27   0    209   782   53
 S   102010    238   667   260     0    0    0     0   0   0    245   687  268
 W   103010    140  1000   209     1    3    0     0  35   0    145  1068  215
===========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./   ADJ.   C. CAP.
              L S T S R O                            LANE    G/C
===========================================================================
 N      2     0 0 2 0 0 0    851     3560    0.239   0.047   0.286   1018
 E      1     1 0 0 0 0 0    203     1675    0.121   0.024   0.145    243
 S      1     1 0 0 0 0 0    238     1675    0.142   0.024   0.166    278
 W      3     0 0 3 0 0 0   1000     5340    0.187   0.071   0.258   1378
                                          LT = 0.146
TOTALS  7                   2292                 0.835                   2917
                                          1 - 0.835 = 0.165 /  7 = 0.024
                                                                V/C = 0.786
                                      EXISTING         LEVEL OF SERVICE =   C
---------------------------------------------------------------------------
 N      2     0 0 2 0 0 0    877     3560    0.246   0.041   0.287   1022
 E      1     1 0 0 0 0 0    209     1675    0.125   0.021   0.146    245
 S      1     1 0 0 0 0 0    245     1675    0.146   0.021   0.167    280
 W      3     0 0 3 0 0 0   1033     5340    0.193   0.062   0.255   1362
                                          LT = 0.146
TOTALS  7                   2364                 0.856                   2909
                                          1 - 0.856 = 0.144 /  7 = 0.021
                                                                V/C = 0.813
                            EXISTING + APPROVED    LEVEL OF SERVICE =   D
---------------------------------------------------------------------------
 N      2     0 0 2 0 0 0    877     3560    0.246   0.039   0.285   1015
 E      1     1 0 0 0 0 0    209     1675    0.125   0.020   0.145    243
 S      1     1 0 0 0 0 0    245     1675    0.146   0.020   0.166    278
 W      3     0 0 3 0 0 0   1068     5340    0.200   0.059   0.259   1383
                                          LT = 0.146
TOTALS  7                   2399                 0.863                   2919
                                          1 - 0.863 = 0.137 /  7 = 0.020
                                                                V/C = 0.822
                  EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   D
===========================================================================
( 2399 - 2364 )/ 2364 =    1.48 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

```
                       LEVEL OF SERVICE ANALYSIS
==========================================================================
LOCATION:      SARATOGA & STEVENS CREEK
MESSAGE:       CUMULATIVE CONDITIONS  SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:     PM                     N-S      49.50    8.50
COUNT DATE:    10/96                  E-W      53.00    9.00
ANAL. DATE:    7/2/97
ANAL. INIT:    RD                     CYCLE LENGTH =  120
GROWTH FACTOR % :    3.0              LOST TIME    =  0.146
-------------------------------------------------------------------------
LEG  PATTERN        LANE            APPROVED     PROJECT          TOTAL
                   COUNTS             TRIPS        TRIPS           TRIPS
     LSTSRO     LT   THRU   RT     LT THRU  RT   LT THRU  RT     LT  THRU   RT
 N   102010    141    851  148      0    0   3    0    0   0    145   877  155
 E   103010    203    727   51      0    6   0    0   40   0    209   795   53
 S   102010    238    667  260      0    0   0    0    0   0    245   687  268
 W   103010    140   1000  209      1    3   0    0   48   0    145  1081  215
=========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.    C. CAP.
              L S T S R O                             LANE     G/C
=========================================================================
 N      2     0 0 2 0 0 0    851      3560   0.239   0.047   0.286    1018
 E      1     1 0 0 0 0 0    203      1675   0.121   0.024   0.145     243
 S      1     1 0 0 0 0 0    238      1675   0.142   0.024   0.166     278
 W      3     0 0 3 0 0 0   1000      5340   0.187   0.071   0.258    1378
                                          LT = 0.146
TOTALS  7                   2292             0.835                    2917
                                      1 - 0.835 = 0.165 /  7 = 0.024
                                                               V/C = 0.786
                                 EXISTING           LEVEL OF SERVICE =   C
-------------------------------------------------------------------------
 N      2     0 0 2 0 0 0    877      3560   0.246   0.041   0.287    1022
 E      1     1 0 0 0 0 0    209      1675   0.125   0.021   0.146     245
 S      1     1 0 0 0 0 0    245      1675   0.146   0.021   0.167     280
 W      3     0 0 3 0 0 0   1033      5340   0.193   0.062   0.255    1362
                                          LT = 0.146
TOTALS  7                   2364             0.856                    2909
                                      1 - 0.856 = 0.144 /  7 = 0.021
                                                               V/C = 0.813
                             EXISTING + APPROVED    LEVEL OF SERVICE =   D
-------------------------------------------------------------------------
 N      2     0 0 2 0 0 0    877      3560   0.246   0.039   0.285    1015
 E      1     1 0 0 0 0 0    209      1675   0.125   0.019   0.144     241
 S      1     1 0 0 0 0 0    245      1675   0.146   0.019   0.165     276
 W      3     0 0 3 0 0 0   1081      5340   0.202   0.058   0.260    1388
                                          LT = 0.146
TOTALS  7                   2412             0.865                    2920
                                      1 - 0.865 = 0.135 /  7 = 0.019
                                                               V/C = 0.826
                      EXISTING + APPROVED + PROJECT     LEVEL OF SERVICE =   D
=========================================================================
( 2412 - 2364 )/ 2364 =   2.03 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                         LEVEL OF SERVICE ANALYSIS
==========================================================================
LOCATION:       EMPORIUM & STEVENS CREEK
MESSAGE:        PROJECT CONDITIONS      SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:      AM                      N-S      34.00     4.00
COUNT DATE:     4/15/97                 E-W      88.00     8.00
ANAL. DATE:     7/2/97
ANAL. INIT:     RD                      CYCLE LENGTH =  134
GROWTH FACTOR % :     0.0               LOST TIME     =  0.090
-------------------------------------------------------------------------
LEG  PATTERN      LANE            APPROVED     PROJECT          TOTAL
                 COUNTS            TRIPS        TRIPS           TRIPS
     LSTSRO    LT  THRU   RT    LT THRU  RT   LT THRU RT     LT  THRU   RT
 N   101010    20     3    5     0    0   0    0    0  0     20     3    5
 E   203010    98  1523   12     0   13   0   88    0  0    186  1536   12
 S   101010    14     6   33     0    0   0    0    0 142    14     6  175
 W   203010    20   735   15     0   24   0    0    0  0     20   759   15
=========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
               L S T S R O                            LANE     G/C
=========================================================================
 N       1    1 0 0 0 0 0     20     1675   0.012   0.086   0.098     164
 E       3    0 0 3 0 0 0   1523     5340   0.285   0.258   0.543    2900
 S       1    0 0 1 0 0 0      6     1780   0.003   0.086   0.089     158
 W       2    2 0 0 0 0 0     20     3015   0.007   0.172   0.179     540
                                       LT = 0.090
TOTALS   7                  1569            0.397                    3762
                                    1 - 0.397 = 0.603 /  7 = 0.086
                                                          V/C = 0.417
                              EXISTING          LEVEL OF SERVICE =   A
-------------------------------------------------------------------------
 N       1    1 0 0 0 0 0     20     1675   0.012   0.086   0.098     164
 E       3    0 0 3 0 0 0   1536     5340   0.288   0.257   0.545    2910
 S       1    0 0 1 0 0 0      6     1780   0.003   0.086   0.089     158
 W       2    2 0 0 0 0 0     20     3015   0.007   0.171   0.178     537
                                       LT = 0.090
TOTALS   7                  1582            0.400                    3769
                                    1 - 0.400 = 0.600 /  7 = 0.086
                                                          V/C = 0.420
                          EXISTING + APPROVED   LEVEL OF SERVICE =   A
-------------------------------------------------------------------------
 N       1    1 0 0 0 0 0     20     1675   0.012   0.086   0.098     164
 E       3    0 0 3 0 0 0   1536     5340   0.288   0.257   0.545    2910
 S       1    0 0 1 0 0 0      6     1780   0.003   0.086   0.089     158
 W       2    2 0 0 0 0 0     20     3015   0.007   0.171   0.178     537
                                       LT = 0.090
TOTALS   7                  1582            0.400                    3769
                                    1 - 0.400 = 0.600 /  7 = 0.086
                                                          V/C = 0.420
                 EXISTING + APPROVED + PROJECT   LEVEL OF SERVICE =   A
=========================================================================
( 1582 - 1582 )/ 1582 =   0.00 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

```
                          LEVEL OF SERVICE ANALYSIS
=========================================================================
LOCATION:      EMPORIUM & STEVENS CREEK
MESSAGE:       CUMULATIVE CONDITIONS  SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:     AM                     N-S      34.00    4.00
COUNT DATE:    4/15/97                E-W      88.00    8.00
ANAL. DATE:    7/2/97
ANAL. INIT:    RD                     CYCLE LENGTH =  134
GROWTH FACTOR % :    0.0              LOST TIME    =  0.090
-----------------------------------------------------------------------
LEG  PATTERN      LANE            APPROVED      PROJECT        TOTAL
                 COUNTS            TRIPS         TRIPS         TRIPS
     LSTSRO    LT  THRU   RT    LT THRU  RT   LT THRU RT    LT  THRU   RT
N    101010    20     3    5     0    0   0    0   0   0    20     3    5
E    203010    98  1523   12     0   13   0   88   9   0   186  1545   12
S    101010    14     6   33     0    0   0    0   1 142    14     7  175
W    203010    20   735   15     0   24   0    0  15   0    20   774   15
=======================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./   ADJ.  C. CAP.
              L S T S R O                            LANE    G/C
=======================================================================
N        1    1 0 0 0 0 0      20     1675   0.012   0.086   0.098   164
E        3    0 0 3 0 0 0    1523     5340   0.285   0.258   0.543  2900
S        1    0 0 1 0 0 0       6     1780   0.003   0.086   0.089   158
W        2    2 0 0 0 0 0      20     3015   0.007   0.172   0.179   540
                                        LT = 0.090
TOTALS   7                   1569            0.397                  3762
                                     1 - 0.397 = 0.603 /  7 = 0.086
                                                             V/C = 0.417
                                  EXISTING          LEVEL OF SERVICE =   A
-----------------------------------------------------------------------
N        1    1 0 0 0 0 0      20     1675   0.012   0.086   0.098   164
E        3    0 0 3 0 0 0    1536     5340   0.288   0.257   0.545  2910
S        1    0 0 1 0 0 0       6     1780   0.003   0.086   0.089   158
W        2    2 0 0 0 0 0      20     3015   0.007   0.171   0.178   537
                                        LT = 0.090
TOTALS   7                   1582            0.400                  3769
                                     1 - 0.400 = 0.600 /  7 = 0.086
                                                             V/C = 0.420
                              EXISTING + APPROVED     LEVEL OF SERVICE =   A
-----------------------------------------------------------------------
N        1    1 0 0 0 0 0      20     1675   0.012   0.085   0.097   162
E        3    0 0 3 0 0 0    1545     5340   0.289   0.256   0.545  2910
S        1    0 0 1 0 0 0       7     1780   0.004   0.085   0.089   158
W        2    2 0 0 0 0 0      20     3015   0.007   0.171   0.178   537
                                        LT = 0.090
TOTALS   7                   1592            0.402                  3767
                                     1 - 0.402 = 0.598 /  7 = 0.085
                                                             V/C = 0.423
                 EXISTING + APPROVED + PROJECT     LEVEL OF SERVICE =   A
=======================================================================
( 1592 - 1582 )/ 1582 =   0.63 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                         LEVEL OF SERVICE ANALYSIS
=============================================================================
LOCATION:      EMPORIUM & STEVENS CREEK
MESSAGE:       PROJECT CONDITIONS      SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:     PM                      N-S      34.00    4.00
COUNT DATE:    4/15/97                 E-W      88.00    8.00
ANAL. DATE:    7/2/97
ANAL. INIT:    RD                      CYCLE LENGTH =  134
GROWTH FACTOR % :    0.0               LOST TIME    =  0.090
---------------------------------------------------------------------------
LEG  PATTERN       LANE           APPROVED     PROJECT          TOTAL
                  COUNTS            TRIPS        TRIPS           TRIPS
     LSTSRO    LT   THRU   RT    LT THRU  RT   LT THRU RT     LT  THRU   RT
 N   101010   134     20   99     0    0   0    0    0  0    134    20   99
 E   203010   172   1273   29     0   86   0  220    0  0    392  1359   29
 S   101010    35     19  141     0    0   0    0    0 171    35    19  312
 W   203010   156   1439   46     0  103   0    0    0  0    156  1542   46
===========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
              L S T S R O                            LANE     G/C
===========================================================================
 N      1     1 0 0 0 0 0     134     1675   0.080   0.070   0.150     251
 E      2     2 0 0 0 0 0     172     3015   0.057   0.141   0.198     597
 S      1     0 0 1 0 0 0      19     1780   0.011   0.070   0.081     144
 W      3     0 0 3 0 0 0    1439     5340   0.269   0.211   0.480    2563
                                         LT = 0.090
TOTALS  7                    1764            0.507                    3555
                                    1 - 0.507 = 0.493 /  7 = 0.070
                                                             V/C = 0.496
                               EXISTING           LEVEL OF SERVICE =   A
---------------------------------------------------------------------------
 N      1     1 0 0 0 0 0     134     1675   0.080   0.068   0.148     248
 E      2     2 0 0 0 0 0     172     3015   0.057   0.135   0.192     579
 S      1     0 0 1 0 0 0      19     1780   0.011   0.068   0.079     141
 W      3     0 0 3 0 0 0    1542     5340   0.289   0.203   0.492    2627
                                         LT = 0.090
TOTALS  7                    1867            0.527                    3595
                                    1 - 0.527 = 0.473 /  7 = 0.068
                                                             V/C = 0.519
                          EXISTING + APPROVED     LEVEL OF SERVICE =   A
---------------------------------------------------------------------------
 N      1     1 0 0 0 0 0     134     1675   0.080   0.057   0.137     229
 E      2     2 0 0 0 0 0     392     3015   0.130   0.114   0.244     736
 S      1     0 0 1 0 0 0      19     1780   0.011   0.057   0.068     121
 W      3     0 0 3 0 0 0    1542     5340   0.289   0.171   0.460    2456
                                         LT = 0.090
TOTALS  7                    2087            0.600                    3542
                                    1 - 0.600 = 0.400 /  7 = 0.057
                                                             V/C = 0.589
                 EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   A
===========================================================================
( 2087 - 1867 )/ 1867 =  11.78 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

```
                         LEVEL OF SERVICE ANALYSIS
==========================================================================
LOCATION:        EMPORIUM & STEVENS CREEK
MESSAGE:         CUMULATIVE CONDITIONS  SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:       PM                     N-S      34.00    4.00
COUNT DATE:      4/15/97                E-W      88.00    8.00
ANAL. DATE:      7/2/97
ANAL. INIT:      RD                     CYCLE LENGTH =  134
GROWTH FACTOR % :    0.0                LOST TIME    =  0.090
------------------------------------------------------------------------
LEG  PATTERN     LANE          APPROVED     PROJECT          TOTAL
                COUNTS           TRIPS       TRIPS           TRIPS
     LSTSRO   LT  THRU  RT    LT THRU  RT   LT THRU RT    LT  THRU  RT
 N   101010  134    20  99     0    0   0    0   2   0   134    22  99
 E   203010  172  1273  29     0   86   0  220  56   0   392  1415  29
 S   101010   35    19 141     0    0   0    0   2 171    35    21 312
 W   203010  156  1439  46     0  103   0    0  56   0   156  1598  46
========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./   ADJ.   C. CAP.
               L S T S R O                           LANE    G/C
========================================================================
 N      1     1 0 0 0 0 0     134     1675   0.080   0.070   0.150    251
 E      2     2 0 0 0 0 0     172     3015   0.057   0.141   0.198    597
 S      1     0 0 1 0 0 0      19     1780   0.011   0.070   0.081    144
 W      3     0 0 3 0 0 0    1439     5340   0.269   0.211   0.480   2563
                                          LT = 0.090
TOTALS  7                    1764              0.507                  3555
                                       1 - 0.507 = 0.493 /  7 = 0.070
                                                              V/C = 0.496
                                 EXISTING           LEVEL OF SERVICE =   A
------------------------------------------------------------------------
 N      1     1 0 0 0 0 0     134     1675   0.080   0.068   0.148    248
 E      2     2 0 0 0 0 0     172     3015   0.057   0.135   0.192    579
 S      1     0 0 1 0 0 0      19     1780   0.011   0.068   0.079    141
 W      3     0 0 3 0 0 0    1542     5340   0.289   0.203   0.492   2627
                                          LT = 0.090
TOTALS  7                    1867              0.527                  3595
                                       1 - 0.527 = 0.473 /  7 = 0.068
                                                              V/C = 0.519
                            EXISTING + APPROVED     LEVEL OF SERVICE =   A
------------------------------------------------------------------------
 N      1     1 0 0 0 0 0     134     1675   0.080   0.056   0.136    228
 E      2     2 0 0 0 0 0     392     3015   0.130   0.111   0.241    727
 S      1     0 0 1 0 0 0      21     1780   0.012   0.056   0.068    121
 W      3     0 0 3 0 0 0    1598     5340   0.299   0.167   0.466   2488
                                          LT = 0.090
TOTALS  7                    2145              0.611                  3564
                                       1 - 0.611 = 0.389 /  7 = 0.056
                                                              V/C = 0.602
                  EXISTING + APPROVED + PROJECT     LEVEL OF SERVICE =   B
========================================================================
( 2145 - 1867 )/ 1867 =  14.89 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                          LEVEL OF SERVICE ANALYSIS
==========================================================================
LOCATION:      EMPORIUM & STEVENS CREEK
MESSAGE:       PROJECT CONDITIONS     SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:     SATURDAY PEAK          N-S      34.00    4.00
COUNT DATE:    9/27/97                E-W      88.00    3.00
ANAL. DATE:    7/2/97
ANAL. INIT:    RD                     CYCLE LENGTH =  134
GROWTH FACTOR % :    0.0              LOST TIME    =  0.090
------------------------------------------------------------------------
LEG  PATTERN      LANE          APPROVED     PROJECT          TOTAL
                 COUNTS           TRIPS       TRIPS            TRIPS
     LSTSRO    LT  THRU   RT   LT THRU  RT   LT THRU RT    LT  THRU   RT
 N   101010   178    46  196    0    0   0    0    0  0   178    46  196
 E   203010   177  1502   99    0   86   0  223    0  0   400  1588   99
 S   101010    48    87  223    0    0   0    0    0 174   48    87  397
 W   203010   374  1576   63    0  103   0    0    0  0   374  1679   63
========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./   ADJ.   C. CAP.
              L S T S R O                             LANE   G/C
========================================================================
 N      1     1 0 0 0 0 0     178     1675   0.106  0.050  0.156     261
 E      3     0 0 3 0 0 0    1502     5340   0.281  0.150  0.431    2302
 S      1     0 0 1 0 0 0      87     1780   0.049  0.050  0.099     176
 W      2     2 0 0 0 0 0     374     3015   0.124  0.100  0.224     675
                                        LT = 0.090
TOTALS  7                    2141            0.650                  3414
                                    1 - 0.650 = 0.350 /  7 = 0.050
                                                         V/C = 0.627
                          EXISTING         LEVEL OF SERVICE =   B
------------------------------------------------------------------------
 N      1     1 0 0 0 0 0     178     1675   0.106  0.048  0.154     258
 E      3     0 0 3 0 0 0    1588     5340   0.297  0.143  0.440    2350
 S      1     0 0 1 0 0 0      87     1780   0.049  0.048  0.097     173
 W      2     2 0 0 0 0 0     374     3015   0.124  0.095  0.219     660
                                        LT = 0.090
TOTALS  7                    2227            0.666                  3441
                                    1 - 0.666 = 0.334 /  7 = 0.048
                                                         V/C = 0.647
                       EXISTING + APPROVED     LEVEL OF SERVICE =   B
------------------------------------------------------------------------
 N      1     1 0 0 0 0 0     178     1675   0.106  0.044  0.150     251
 E      2     2 0 0 0 0 0     400     3015   0.133  0.088  0.221     666
 S      1     0 0 1 0 0 0      87     1780   0.049  0.044  0.093     166
 W      3     0 0 3 0 0 0    1679     5340   0.314  0.132  0.446    2382
                                        LT = 0.090
TOTALS  7                    2344            0.692                  3465
                                    1 - 0.692 = 0.308 /  7 = 0.044
                                                         V/C = 0.676
                 EXISTING + APPROVED + PROJECT     LEVEL OF SERVICE =   B
========================================================================
( 2344 - 2227 )/ 2227 =    5.25 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                          LEVEL OF SERVICE ANALYSIS
==========================================================================
LOCATION:        EMPORIUM & STEVENS CREEK
MESSAGE:         CUMULATIVE CONDITIONS  SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:       SATURDAY PEAK          N-S      34.00    4.00
COUNT DATE:      4/15/97                E-W      88.00    8.00
ANAL. DATE:      7/2/97
ANAL. INIT:      RD                     CYCLE LENGTH =  134
GROWTH FACTOR % :     0.0               LOST TIME    =  0.090
-------------------------------------------------------------------------
LEG  PATTERN      LANE           APPROVED     PROJECT          TOTAL
                 COUNTS            TRIPS       TRIPS           TRIPS
     LSTSRO    LT  THRU   RT    LT THRU  RT   LT THRU RT     LT  THRU   RT
 N   101010   178    46  196     0    0   0    0   2   0    178    48  196
 E   203010   177  1502   99     0   86   0  223  69   0    400  1657   99
 S   101010    48    87  223     0    0   0    0   2 174     48    89  397
 W   203010   374  1576   63     0  103   0    0  69   0    374  1748   63
=========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./   ADJ.   C. CAP.
               L S T S R O                           LANE    G/C
=========================================================================
 N      1     1 0 0 0 0 0     178     1675   0.106   0.050   0.156     261
 E      3     0 0 3 0 0 0    1502     5340   0.281   0.150   0.431    2302
 S      1     0 0 1 0 0 0      87     1780   0.049   0.050   0.099     176
 W      2     2 0 0 0 0 0     374     3015   0.124   0.100   0.224     675
                                       LT = 0.090
TOTALS  7                    2141            0.650                    3414
                                      1 - 0.650 = 0.350 /  7 = 0.050
                                                              V/C = 0.627
                                  EXISTING          LEVEL OF SERVICE =   B
-------------------------------------------------------------------------
 N      1     1 0 0 0 0 0     178     1675   0.106   0.048   0.154     258
 E      3     0 0 3 0 0 0    1588     5340   0.297   0.143   0.440    2350
 S      1     0 0 1 0 0 0      87     1780   0.049   0.048   0.097     173
 W      2     2 0 0 0 0 0     374     3015   0.124   0.095   0.219     660
                                       LT = 0.090
TOTALS  7                    2227            0.666                    3441
                                      1 - 0.666 = 0.334 /  7 = 0.048
                                                              V/C = 0.647
                              EXISTING + APPROVED    LEVEL OF SERVICE =   B
-------------------------------------------------------------------------
 N      1     1 0 0 0 0 0     178     1675   0.106   0.042   0.148     248
 E      2     2 0 0 0 0 0     400     3015   0.133   0.084   0.217     654
 S      1     0 0 1 0 0 0      89     1780   0.050   0.042   0.092     164
 W      3     0 0 3 0 0 0    1748     5340   0.327   0.126   0.453    2419
                                       LT = 0.090
TOTALS  7                    2415            0.706                    3485
                                      1 - 0.706 = 0.294 /  7 = 0.042
                                                              V/C = 0.693
                      EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   B
=========================================================================
( 2415 - 2227 )/ 2227 =   8.44 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

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                         LEVEL OF SERVICE ANALYSIS
=========================================================================
LOCATION:       REDWOOD & STEVENS CREEK
MESSAGE:        PROJECT CONDITIONS       SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:      AM                       N-S      40.00    3.00
COUNT DATE:     4/10/97                  E-W      90.00    6.50
ANAL. DATE:     7/2/97
ANAL. INIT:     RD                       CYCLE LENGTH =  139.5
GROWTH FACTOR % :    0.0                 LOST TIME    =  0.068
-----------------------------------------------------------------------
LEG  PATTERN       LANE            APPROVED     PROJECT          TOTAL
                  COUNTS             TRIPS        TRIPS            TRIPS
     LSTSRO     LT   THRU   RT    LT THRU  RT   LT THRU RT     LT  THRU   RT
 N   200010     17     0     9     0    0   0    0    0  0     17     0    9
 E   103010     41  1585    52     0    5   0   12   88  0     53  1678   52
 S   000000      0     0     0     8    0   0    0    0  0      8     0    0
 W   203000     26   827     0     0   20   4    0  142  0     26   989    4
=======================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
              L S T S R O                            LANE     G/C
=======================================================================
 N      2     2 0 0 0 0 0     17     3015    0.006   0.177   0.183     552
 E      3     0 0 3 0 0 0   1585     5340    0.297   0.266   0.563    3006
 S      0     0 0 0 0 0 0      0        0    0.000   0.000   0.000       0
 W      2     2 0 0 0 0 0     26     3015    0.009   0.177   0.186     561
                                       LT = 0.068
TOTALS  7                   1628             0.380                    4119
                                     1 - 0.380 = 0.620 /  7 = 0.089
                                                           V/C = 0.395
                               EXISTING           LEVEL OF SERVICE =   A
-----------------------------------------------------------------------
 N      2     2 0 0 0 0 0     17     3015    0.006   0.177   0.183     552
 E      3     0 0 3 0 0 0   1590     5340    0.298   0.265   0.563    3006
 S      0     0 0 0 0 0 0      0        0    0.000   0.000   0.000       0
 W      2     2 0 0 0 0 0     26     3015    0.009   0.177   0.186     561
                                       LT = 0.068
TOTALS  7                   1633             0.381                    4119
                                     1 - 0.381 = 0.619 /  7 = 0.088
                                                           V/C = 0.396
                          EXISTING + APPROVED     LEVEL OF SERVICE =   A
-----------------------------------------------------------------------
 N      2     2 0 0 0 0 0     17     3015    0.006   0.172   0.178     537
 E      3     0 0 3 0 0 0   1678     5340    0.314   0.258   0.572    3054
 S      0     0 0 0 0 0 0      0        0    0.000   0.000   0.000       0
 W      2     2 0 0 0 0 0     26     3015    0.009   0.172   0.181     546
                                       LT = 0.068
TOTALS  7                   1721             0.397                    4137
                                     1 - 0.397 = 0.603 /  7 = 0.086
                                                           V/C = 0.416
                EXISTING + APPROVED + PROJECT     LEVEL OF SERVICE =   A
=======================================================================
( 1721 - 1633 )/ 1633 =   5.39 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                         LEVEL OF SERVICE ANALYSIS
==========================================================================
LOCATION:       REDWOOD & STEVENS CREEK
MESSAGE:        CUMULATIVE CONDITIONS  SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:      AM                     N-S      40.00    3.00
COUNT DATE:     4/10/97                E-W      90.00    6.50
ANAL. DATE:     7/2/97
ANAL. INIT:     RD                     CYCLE LENGTH =  139.5
GROWTH FACTOR % :    0.0               LOST TIME    =  0.068
------------------------------------------------------------------------
LEG  PATTERN      LANE             APPROVED      PROJECT         TOTAL
                 COUNTS              TRIPS         TRIPS          TRIPS
     LSTSRO    LT  THRU   RT      LT THRU  RT   LT THRU RT     LT  THRU   RT
 N   200010    17     0    9       0    0   0    7   0   9     24     0   18
 E   103010    41  1585   52       0    5   0   12  88  12     53  1678   64
 S   000000     0     0    0       8    0   0    0   0   0      8     0    0
 W   203000    26   827    0       0   20   4   15 142   0     41   989    4
========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
              L S T S R O                            LANE     G/C
========================================================================
 N      2     2 0 0 0 0 0      17     3015   0.006   0.177   0.183    552
 E      3     0 0 3 0 0 0    1585     5340   0.297   0.266   0.563   3006
 S      0     0 0 0 0 0 0       0        0   0.000   0.000   0.000      0
 W      2     2 0 0 0 0 0      26     3015   0.009   0.177   0.186    561
                                        LT = 0.068
TOTALS  7                    1628            0.380                   4119
                                     1 - 0.380 = 0.620 /  7 = 0.089
                                                             V/C = 0.395
                                 EXISTING          LEVEL OF SERVICE =   A
------------------------------------------------------------------------
 N      2     2 0 0 0 0 0      17     3015   0.006   0.177   0.183    552
 E      3     0 0 3 0 0 0    1590     5340   0.298   0.265   0.563   3006
 S      0     0 0 0 0 0 0       0        0   0.000   0.000   0.000      0
 W      2     2 0 0 0 0 0      26     3015   0.009   0.177   0.186    561
                                        LT = 0.068
TOTALS  7                    1633            0.381                   4119
                                     1 - 0.381 = 0.619 /  7 = 0.088
                                                             V/C = 0.396
                             EXISTING + APPROVED    LEVEL OF SERVICE =   A
------------------------------------------------------------------------
 N      2     2 0 0 0 0 0      24     3015   0.008   0.170   0.178    537
 E      3     0 0 3 0 0 0    1678     5340   0.314   0.255   0.569   3038
 S      0     0 0 0 0 0 0       0        0   0.000   0.000   0.000      0
 W      2     2 0 0 0 0 0      41     3015   0.014   0.170   0.184    555
                                        LT = 0.068
TOTALS  7                    1743            0.404                   4130
                                     1 - 0.404 = 0.596 /  7 = 0.085
                                                             V/C = 0.422
                  EXISTING + APPROVED + PROJECT     LEVEL OF SERVICE =   A
========================================================================
( 1743 - 1633 )/ 1633 =   6.74 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                         LEVEL OF SERVICE ANALYSIS
==========================================================================
LOCATION:      REDWOOD & STEVENS CREEK
MESSAGE:       PROJECT CONDITIONS      SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:     PM                      N-S      40.00    3.00
COUNT DATE:    4/10/97                 E-W      90.00    6.50
ANAL. DATE:    7/2/97
ANAL. INIT:    RD                      CYCLE LENGTH =  139.5
GROWTH FACTOR % :    0.0               LOST TIME    =  0.068
------------------------------------------------------------------------
LEG  PATTERN      LANE            APPROVED     PROJECT          TOTAL
                 COUNTS             TRIPS        TRIPS           TRIPS
     LSTSRO    LT   THRU   RT    LT THRU  RT    LT THRU RT     LT  THRU   RT
 N   200010   214      0  126     0    0   0     0    0  0    214     0  126
 E   103010    56   1373  214   114   82   0    25  220  0    195  1675  214
 S   000000     0      0    0     4    0   0     0    0  0      4     0    0
 W   203000   143   1613    0     0   95   8     0  171  0    143  1879    8
========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
              L S T S R O                            LANE     G/C
========================================================================
 N       2    2 0 0 0 0 0     214     3015   0.071   0.175   0.246     742
 E       1    1 0 0 0 0 0      56     1675   0.033   0.088   0.121     203
 S       0    0 0 0 0 0 0       0        0   0.000   0.000   0.000       0
 W       3    0 0 3 0 0 0    1613     5340   0.302   0.263   0.565    3017
                                         LT = 0.068
TOTALS   6                   1883            0.474                    3962
                                   1 - 0.474 = 0.526 /  6 = 0.088
                                                          V/C = 0.475
                                EXISTING         LEVEL OF SERVICE =   A
------------------------------------------------------------------------
 N       2    2 0 0 0 0 0     214     3015   0.071   0.147   0.218     657
 E       1    1 0 0 0 0 0     170     1675   0.101   0.073   0.174     291
 S       0    0 0 0 0 0 0       0        0   0.000   0.000   0.000       0
 W       3    0 0 3 0 0 0    1708     5340   0.320   0.220   0.540    2884
                                         LT = 0.068
TOTALS   6                   2092            0.560                    3832
                                   1 - 0.560 = 0.440 /  6 = 0.073
                                                          V/C = 0.546
                             EXISTING + APPROVED   LEVEL OF SERVICE =   A
------------------------------------------------------------------------
 N       2    2 0 0 0 0 0     214     3015   0.071   0.131   0.202     609
 E       1    1 0 0 0 0 0     195     1675   0.116   0.065   0.181     303
 S       0    0 0 0 0 0 0       0        0   0.000   0.000   0.000       0
 W       3    0 0 3 0 0 0    1879     5340   0.352   0.196   0.548    2926
                                         LT = 0.068
TOTALS   6                   2288            0.607                    3838
                                   1 - 0.607 = 0.393 /  6 = 0.065
                                                          V/C = 0.596
                   EXISTING + APPROVED + PROJECT   LEVEL OF SERVICE =   A
========================================================================
( 2288 - 2092 )/ 2092 =   9.37 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                         LEVEL OF SERVICE ANALYSIS
==============================================================================
LOCATION:      REDWOOD & STEVENS CREEK
MESSAGE:       CUMULATIVE CONDITIONS  SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:     PM                     N-S       40.00    3.00
COUNT DATE:    4/10/97                E-W       90.00    6.50
ANAL. DATE:    7/2/97
ANAL. INIT:    RD                     CYCLE LENGTH =  139.5
GROWTH FACTOR % :    0.0              LOST TIME    =  0.068
----------------------------------------------------------------------------
LEG  PATTERN      LANE            APPROVED      PROJECT            TOTAL
                 COUNTS             TRIPS        TRIPS             TRIPS
     LSTSRO     LT   THRU   RT     LT THRU  RT    LT THRU RT     LT   THRU   RT
 N   200010    214      0  126      0    0   0    45    0  56    259     0  182
 E   103010     56   1373  214    114   82   0    25  220  45    195  1675  259
 S   000000      0      0    0      4    0   0     0    0   0      4     0    0
 W   203000    143   1613    0      0   95   8    56  171   0    199  1879    8
============================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.    G/C     ADJ./    ADJ.   C. CAP.
              L S T S R O                              LANE     G/C
============================================================================
 N       2    2 0 0 0 0 0     214     3015    0.071   0.175   0.246     742
 E       1    1 0 0 0 0 0      56     1675    0.033   0.088   0.121     203
 S       0    0 0 0 0 0 0       0        0    0.000   0.000   0.000       0
 W       3    0 0 3 0 0 0    1613     5340    0.302   0.263   0.565    3017
                                         LT = 0.068
TOTALS   6                   1883             0.474                    3962
                                       1 - 0.474 = 0.526 /  6 = 0.088
                                                             V/C = 0.475
                                EXISTING          LEVEL OF SERVICE =    A
----------------------------------------------------------------------------
 N       2    2 0 0 0 0 0     214     3015    0.071   0.147   0.218     657
 E       1    1 0 0 0 0 0     170     1675    0.101   0.073   0.174     291
 S       0    0 0 0 0 0 0       0        0    0.000   0.000   0.000       0
 W       3    0 0 3 0 0 0    1708     5340    0.320   0.220   0.540    2884
                                         LT = 0.068
TOTALS   6                   2092             0.560                    3832
                                       1 - 0.560 = 0.440 /  6 = 0.073
                                                             V/C = 0.546
                           EXISTING + APPROVED    LEVEL OF SERVICE =    A
----------------------------------------------------------------------------
 N       2    2 0 0 0 0 0     259     3015    0.086   0.126   0.212     639
 E       1    1 0 0 0 0 0     195     1675    0.116   0.063   0.179     300
 S       0    0 0 0 0 0 0       0        0    0.000   0.000   0.000       0
 W       3    0 0 3 0 0 0    1879     5340    0.352   0.189   0.541    2889
                                         LT = 0.068
TOTALS   6                   2333             0.622                    3828
                                       1 - 0.622 = 0.378 /  6 = 0.063
                                                             V/C = 0.609
                EXISTING + APPROVED + PROJECT     LEVEL OF SERVICE =    B
============================================================================
( 2333 - 2092 )/ 2092 =  11.52 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                          LEVEL OF SERVICE ANALYSIS
=============================================================================
LOCATION:       REDWOOD & STEVENS CREEK
MESSAGE:        PROJECT CONDITIONS     SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:      SATURDAY PEAK          N-S      40.00    3.00
COUNT DATE:     9/27/97                E-W      90.00    6.50
ANAL. DATE:     7/2/97
ANAL. INIT:     RD                     CYCLE LENGTH =  139.5
GROWTH FACTOR % :    0.0               LOST TIME    =  0.068
---------------------------------------------------------------------------
LEG  PATTERN      LANE              APPROVED      PROJECT          TOTAL
                 COUNTS              TRIPS         TRIPS           TRIPS
     LSTSRO    LT  THRU   RT     LT  THRU  RT    LT THRU RT     LT  THRU   RT
 N   200010   248     0  222      0     0   0     0    0  0    248     0  222
 E   103010    59  1541  238    114    82   0    25  223  0    198  1846  238
 S   000000     0     0    0      4     0   0     0    0  0      4     0    0
 W   203000   207  1736   24      0    95   8     0  174  0    207  2005   32
===========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
              L S T S R O                            LANE     V/C
===========================================================================
 N      2     2 0 0 0 0 0     248     3015   0.082   0.163   0.245     739
 E      1     1 0 0 0 0 0      59     1675   0.035   0.082   0.117     196
 S      0     0 0 0 0 0 0       0        0   0.000   0.000   0.000       0
 W      3     0 0 3 0 0 0    1736     5340   0.325   0.245   0.570    3044
                                          LT = 0.068
TOTALS  6                    2043            0.510                    3979
                                       1 - 0.510 = 0.490 /  6 = 0.082
                                                            V/C = 0.513
                             EXISTING          LEVEL OF SERVICE =   A
---------------------------------------------------------------------------
 N      2     2 0 0 0 0 0     248     3015   0.082   0.135   0.217     654
 E      1     1 0 0 0 0 0     173     1675   0.103   0.067   0.170     285
 S      0     0 0 0 0 0 0       0        0   0.000   0.000   0.000       0
 W      3     0 0 3 0 0 0    1831     5340   0.343   0.202   0.545    2910
                                          LT = 0.068
TOTALS  6                    2252            0.596                    3849
                                       1 - 0.596 = 0.404 /  6 = 0.067
                                                            V/C = 0.585
                         EXISTING + APPROVED   LEVEL OF SERVICE =   A
---------------------------------------------------------------------------
 N      2     2 0 0 0 0 0     248     3015   0.082   0.119   0.201     606
 E      1     1 0 0 0 0 0     198     1675   0.118   0.059   0.177     296
 S      0     0 0 0 0 0 0       0        0   0.000   0.000   0.000       0
 W      3     0 0 3 0 0 0    2005     5340   0.375   0.178   0.553    2953
                                          LT = 0.068
TOTALS  6                    2451            0.643                    3855
                                       1 - 0.643 = 0.357 /  6 = 0.059
                                                            V/C = 0.636
                EXISTING + APPROVED + PROJECT   LEVEL OF SERVICE =   B
===========================================================================
( 2451 - 2252 )/ 2252 =   8.84 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                         LEVEL OF SERVICE ANALYSIS
=========================================================================
LOCATION:      REDWOOD & STEVENS CREEK
MESSAGE:       CUMULATIVE CONDITIONS  SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:     SATURDAY PEAK          N-S      40.00    3.00
COUNT DATE:    4/10/97                E-W      90.00    6.50
ANAL. DATE:    7/2/97
ANAL. INIT:    RD                     CYCLE LENGTH =  139.5
GROWTH FACTOR % :    0.0              LOST TIME     =  0.068
-----------------------------------------------------------------------
LEG  PATTERN      LANE          APPROVED     PROJECT          TOTAL
                 COUNTS           TRIPS        TRIPS           TRIPS
     LSTSRO    LT  THRU   RT   LT THRU  RT   LT THRU RT     LT  THRU   RT
 N   200010   248    0  222    0    0   0    56   0  69    304     0  291
 E   103010    59 1541  238  114   82   0    25 223  56    198  1846  294
 S   000000     0    0    0    4    0   0     0   0   0      4     0    0
 W   203000   207 1736   24    0   95   8    69 174   0    276  2005   32
=======================================================================
LEG  # LANES  CRIT. MOVE    C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
              L S T S R O                             LANE     G/C
=======================================================================
 N      2     2 0 0 0 0 0     248     3015    0.082   0.163   0.245     739
 E      1     1 0 0 0 0 0      59     1675    0.035   0.082   0.117     196
 S      0     0 0 0 0 0 0       0        0    0.000   0.000   0.000       0
 W      3     0 0 3 0 0 0    1736     5340    0.325   0.245   0.570    3044
                                          LT = 0.068
TOTALS  6                    2043             0.510                    3979
                                       1 - 0.510 = 0.490 /  6 = 0.082
                                                             V/C = 0.513
                                  EXISTING           LEVEL OF SERVICE =   A
-----------------------------------------------------------------------
 N      2     2 0 0 0 0 0     248     3015    0.082   0.135   0.217     654
 E      1     1 0 0 0 0 0     173     1675    0.103   0.067   0.170     285
 S      0     0 0 0 0 0 0       0        0    0.000   0.000   0.000       0
 W      3     0 0 3 0 0 0    1831     5340    0.343   0.202   0.545    2910
                                          LT = 0.068
TOTALS  6                    2252             0.596                    3849
                                       1 - 0.596 = 0.404 /  6 = 0.067
                                                             V/C = 0.585
                             EXISTING + APPROVED     LEVEL OF SERVICE =   A
-----------------------------------------------------------------------
 N      2     2 0 0 0 0 0     304     3015    0.101   0.113   0.214     645
 E      1     1 0 0 0 0 0     198     1675    0.118   0.056   0.174     291
 S      0     0 0 0 0 0 0       0        0    0.000   0.000   0.000       0
 W      3     0 0 3 0 0 0    2005     5340    0.375   0.169   0.544    2905
                                          LT = 0.068
TOTALS  6                    2507             0.662                    3841
                                       1 - 0.662 = 0.338 /  6 = 0.056
                                                             V/C = 0.653
                  EXISTING + APPROVED + PROJECT     LEVEL OF SERVICE =   B
=======================================================================
( 2507 - 2252 )/ 2252 =  11.32 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

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                       LEVEL OF SERVICE ANALYSIS
==========================================================================
LOCATION:      WINCHESTER & STEVENS CREEK
MESSAGE:       PROJECT CONDITIONS     SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:     AM                     N-S      49.50    8.50
COUNT DATE:    4/16/97                E-W      58.50    9.50
ANAL. DATE:    7/2/97
ANAL. INIT:    RD                     CYCLE LENGTH =  126
GROWTH FACTOR % :    0.0              LOST TIME    =  0.143
------------------------------------------------------------------------
LEG  PATTERN      LANE            APPROVED     PROJECT          TOTAL
                 COUNTS             TRIPS       TRIPS           TRIPS
     LSTSRO    LT   THRU   RT     LT THRU  RT   LT THRU RT    LT   THRU   RT
 N   102100   117    241   87     14   16   0    0  12   0   131    269   87
 E   203010   324    787  247      6    0   7    0   0   0   330    787  254
 S   102010   151   1071  260      2    4  10   68   5   0   221   1080  270
 W   203010   145    474  136      0    0   4    0   0  38   145    474  178
========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./   ADJ.   C. CAP.
               L S T S R O                            LANE    G/C
========================================================================
 N      1     1 0 0 0 0 0     117     1675   0.070   0.036  0.106     178
 E      2     2 0 0 0 0 0     324     3015   0.107   0.072  0.179     540
 S      2     0 0 2 0 0 0    1071     3560   0.301   0.072  0.373    1328
 W      3     0 0 3 0 0 0     474     5340   0.089   0.109  0.198    1057
                                          LT = 0.143
TOTALS  8                    1986            0.710                   3103
                                       1 - 0.710 = 0.290 /  8 = 0.036
                                                             V/C = 0.640
                                  EXISTING          LEVEL OF SERVICE =  B
------------------------------------------------------------------------
 N      1     1 0 0 0 0 0     131     1675   0.078   0.035  0.113     189
 E      2     2 0 0 0 0 0     330     3015   0.109   0.070  0.179     540
 S      2     0 0 2 0 0 0    1075     3560   0.302   0.070  0.372    1324
 W      3     0 0 3 0 0 0     474     5340   0.089   0.105  0.194    1036
                                          LT = 0.143
TOTALS  8                    2010            0.721                   3089
                                       1 - 0.721 = 0.279 /  8 = 0.035
                                                             V/C = 0.651
                             EXISTING + APPROVED     LEVEL OF SERVICE =  B
------------------------------------------------------------------------
 N      1     1 0 0 0 0 0     131     1675   0.078   0.035  0.113     189
 E      2     2 0 0 0 0 0     330     3015   0.109   0.069  0.178     537
 S      2     0 0 2 0 0 0    1080     3560   0.303   0.069  0.372    1324
 W      3     0 0 3 0 0 0     474     5340   0.089   0.104  0.193    1031
                                          LT = 0.143
TOTALS  8                    2015            0.722                   3081
                                       1 - 0.722 = 0.278 /  8 = 0.035
                                                             V/C = 0.654
                  EXISTING + APPROVED + PROJECT     LEVEL OF SERVICE =  B
========================================================================
( 2015 - 2010 )/ 2010 =    0.25 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

```
                         LEVEL OF SERVICE ANALYSIS
==========================================================================
LOCATION:     WINCHESTER & STEVENS CREEK
MESSAGE:      CUMULATIVE CONDITIONS  SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:    AM                     N-S      49.50    8.50
COUNT DATE:   4/16/97                E-W      58.50    9.50
ANAL. DATE:   7/2/97
ANAL. INIT:   RD                     CYCLE LENGTH =  126
GROWTH FACTOR % :    0.0             LOST TIME    =  0.143
------------------------------------------------------------------------
LEG  PATTERN      LANE            APPROVED    PROJECT          TOTAL
                 COUNTS             TRIPS       TRIPS           TRIPS
     LSTSRO   LT   THRU   RT    LT THRU  RT   LT THRU RT     LT  THRU   RT
 N   102100   117   241   87    14   16   0    0  15   0    131   272   87
 E   203010   324   787  247     6    0   7    3   6   0    333   793  254
 S   102010   151  1071  260     2    4  10   68  10   6    221  1085  276
 W   203010   145   474  136     0    0   4    0   9  38    145   483  178
========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
               L S T S R O                            LANE     G/C
========================================================================
 N       1    1 0 0 0 0 0     117     1675   0.070   0.036   0.106     178
 E       2    2 0 0 0 0 0     324     3015   0.107   0.072   0.179     540
 S       2    0 0 2 0 0 0    1071     3560   0.301   0.072   0.373    1328
 W       3    0 0 3 0 0 0     474     5340   0.089   0.109   0.198    1057
                                        LT = 0.143
TOTALS  8                    1986            0.710                    3103
                                  1 - 0.710 = 0.290 /  8 = 0.036
                                                           V/C = 0.640
                               EXISTING           LEVEL OF SERVICE =   B
------------------------------------------------------------------------
 N       1    1 0 0 0 0 0     131     1675   0.078   0.035   0.113     189
 E       2    2 0 0 0 0 0     330     3015   0.109   0.070   0.179     540
 S       2    0 0 2 0 0 0    1075     3560   0.302   0.070   0.372    1324
 W       3    0 0 3 0 0 0     474     5340   0.089   0.105   0.194    1036
                                        LT = 0.143
TOTALS  8                    2010            0.721                    3089
                                  1 - 0.721 = 0.279 /  8 = 0.035
                                                           V/C = 0.651
                            EXISTING + APPROVED    LEVEL OF SERVICE =   B
------------------------------------------------------------------------
 N       1    1 0 0 0 0 0     131     1675   0.078   0.034   0.112     188
 E       2    2 0 0 0 0 0     333     3015   0.110   0.068   0.178     537
 S       2    0 0 2 0 0 0    1085     3560   0.305   0.068   0.373    1328
 W       3    0 0 3 0 0 0     483     5340   0.090   0.103   0.193    1031
                                        LT = 0.143
TOTALS  8                    2032            0.726                    3084
                                  1 - 0.726 = 0.274 /  8 = 0.034
                                                           V/C = 0.659
                 EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   B
========================================================================
( 2032 - 2010 )/ 2010 =    1.09 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                           LEVEL OF SERVICE ANALYSIS
==========================================================================
LOCATION:        WINCHESTER & STEVENS CREEK
MESSAGE:         PROJECT CONDITIONS      SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:       PM                      N-S     65.50    8.50
COUNT DATE:      7/10/97                 E-W     51.00    9.00
ANAL. DATE:      7/2/97
ANAL. INIT:      RD                      CYCLE LENGTH =  134
GROWTH FACTOR % :    0.0                 LOST TIME    =  0.131
-------------------------------------------------------------------------
LEG  PATTERN      LANE            APPROVED      PROJECT          TOTAL
                 COUNTS            TRIPS         TRIPS           TRIPS
     LSTSRO    LT  THRU  RT     LT THRU  RT    LT THRU RT     LT  THRU   RT
 N   102100   306   940 191     68    4   0     0  33   0    374   977  191
 E   203010   572   882 204     10    0  76     0   0   0    582   882  280
 S   102010   267   517 439      4   12  35    69  33   0    340   562  474
 W   203010   252  1001 281      0    0   2     0   0  93    252  1001  376
=========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
              L S T S R O                            LANE     G/C
=========================================================================
 N      3     0 0 2 1 0 0    1131     5287   0.214   0.040   0.254    1343
 E      2     2 0 0 0 0 0     572     3015   0.190   0.026   0.216     651
 S      1     1 0 0 0 0 0     267     1675   0.159   0.013   0.172     288
 W      3     0 0 3 0 0 0    1001     5340   0.187   0.040   0.227    1212
                                         LT = 0.131
TOTALS  9                    2971                0.881                3494
                                    1 - 0.881 = 0.119 /  9 = 0.013
                                                           V/C = 0.850
                              EXISTING          LEVEL OF SERVICE =   D
-------------------------------------------------------------------------
 N      3     0 0 2 1 0 0    1135     5287   0.215   0.037   0.252    1332
 E      2     2 0 0 0 0 0     582     3015   0.193   0.025   0.218     657
 S      1     1 0 0 0 0 0     271     1675   0.162   0.012   0.174     291
 W      3     0 0 3 0 0 0    1001     5340   0.187   0.037   0.224    1196
                                         LT = 0.131
TOTALS  9                    2989                0.888                3476
                                    1 - 0.888 = 0.112 /  9 = 0.012
                                                           V/C = 0.860
                         EXISTING + APPROVED    LEVEL OF SERVICE =   D
-------------------------------------------------------------------------
 N      3     0 0 2 1 0 0    1168     5288   0.221   0.022   0.243    1285
 E      2     2 0 0 0 0 0     582     3015   0.193   0.014   0.207     624
 S      1     1 0 0 0 0 0     340     1675   0.203   0.007   0.210     352
 W      3     0 0 3 0 0 0    1001     5340   0.187   0.022   0.209    1116
                                         LT = 0.131
TOTALS  9                    3091                0.935                3377
                                    1 - 0.935 = 0.065 /  9 = 0.007
                                                           V/C = 0.915
                EXISTING + APPROVED + PROJECT   LEVEL OF SERVICE =   E
=========================================================================
( 3091 - 2989 )/ 2989 =    3.41 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                         LEVEL OF SERVICE ANALYSIS
======================================================================
LOCATION:      WINCHESTER & STEVENS CREEK
MESSAGE:       PROJECT CONDITIONS      SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:     PM       MITIGATION     N-S      65.50    8.50
COUNT DATE:    7/10/97                 E-W      51.00    9.00
ANAL. DATE:    7/2/97
ANAL. INIT:    RD                      CYCLE LENGTH =  134
GROWTH FACTOR % :    0.0               LOST TIME    =  0.131
--------------------------------------------------------------------
LEG  PATTERN      LANE            APPROVED     PROJECT          TOTAL
                 COUNTS             TRIPS        TRIPS           TRIPS
     LSTSRO    LT   THRU   RT     LT THRU  RT   LT THRU RT    LT  THRU   RT
 N   202100   306   940   191     68    4   0    0  33   0   374   977  191
 E   203010   572   882   204     10    0  76    0   0   0   582   882  280
 S   202010   267   517   439      4   12  35   69  33   0   340   562  474
 W   203010   252  1001   281      0    0   2    0   0  93   252  1001  376
====================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./   ADJ.   C. CAP.
               L S T S R O                            LANE    G/C
====================================================================

 N      3     0 0 2 1 0 0    1131     5287    0.214  0.057  0.271    1433
 E      2     2 0 0 0 0 0     572     3015    0.190  0.038  0.228     687
 S      2     2 0 0 0 0 0     267     3015    0.089  0.038  0.127     383
 W      3     0 0 3 0 0 0    1001     5340    0.187  0.057  0.244    1303
                                       LT = 0.131
TOTALS 10                    2971             0.811                  3806
                                        1 - 0.811 = 0.189 / 10 = 0.019
                                                             V/C = 0.781
                                   EXISTING           LEVEL OF SERVICE =  C
--------------------------------------------------------------------
 N      3     0 0 2 1 0 0    1135     5287    0.215  0.055  0.270    1427
 E      2     2 0 0 0 0 0     582     3015    0.193  0.037  0.230     693
 S      2     2 0 0 0 0 0     271     3015    0.090  0.037  0.127     383
 W      3     0 0 3 0 0 0    1001     5340    0.187  0.055  0.242    1292
                                       LT = 0.131
TOTALS 10                    2989             0.816                  3795
                                        1 - 0.816 = 0.184 / 10 = 0.018
                                                             V/C = 0.788
                              EXISTING + APPROVED     LEVEL OF SERVICE =  C
--------------------------------------------------------------------
 N      3     0 0 2 1 0 0    1168     5288    0.221  0.046  0.267    1412
 E      2     2 0 0 0 0 0     582     3015    0.193  0.031  0.224     675
 S      2     2 0 0 0 0 0     340     3015    0.113  0.031  0.144     434
 W      3     0 0 3 0 0 0    1001     5340    0.187  0.046  0.233    1244
                                       LT = 0.131
TOTALS 10                    3091             0.845                  3765
                                        1 - 0.845 = 0.155 / 10 = 0.015
                                                             V/C = 0.821
                        EXISTING + APPROVED + PROJECT     LEVEL OF SERVICE =  D
====================================================================
( 3091 - 2989 )/ 2989 =   3.41 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                              LEVEL OF SERVICE ANALYSIS
===========================================================================
LOCATION:      WINCHESTER & STEVENS CREEK
MESSAGE:       CUMULATIVE CONDITIONS  SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:     PM                     N-S      65.50    8.50
COUNT DATE:    7/10/97                E-W      51.00    9.00
ANAL. DATE:    7/2/97
ANAL. INIT:    RD                     CYCLE LENGTH =  134
GROWTH FACTOR % :    0.0              LOST TIME    =  0.131
-------------------------------------------------------------------------
LEG  PATTERN      LANE           APPROVED     PROJECT          TOTAL
                 COUNTS            TRIPS        TRIPS            TRIPS
     LSTSRO    LT  THRU   RT     LT THRU  RT   LT THRU RT     LT  THRU   RT
 N   102100   306   940  191     68    4   0    0  51   0    374   995  191
 E   203010   572   882  204     10    0  76   19  37   0    601   919  280
 S   102010   267   517  439      4   12  35   69  51  19    340   580  493
 W   203010   252  1001  281      0    0   2    0  37  93    252  1038  376
=========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
              L S T S R O                             LANE     G/C
=========================================================================
 N       3    0 0 2 1 0 0    1131     5287   0.214   0.040   0.254    1343
 E       2    2 0 0 0 0 0     572     3015   0.190   0.026   0.216     651
 S       1    1 0 0 0 0 0     267     1675   0.159   0.013   0.172     288
 W       3    0 0 3 0 0 0    1001     5340   0.187   0.040   0.227    1212
                                         LT = 0.131
TOTALS   9                   2971            0.881                    3494
                                      1 - 0.881 = 0.119 /  9 = 0.013
                                                             V/C = 0.850
                                 EXISTING          LEVEL OF SERVICE =   D
-------------------------------------------------------------------------
 N       3    0 0 2 1 0 0    1135     5287   0.215   0.037   0.252    1332
 E       2    2 0 0 0 0 0     582     3015   0.193   0.025   0.218     657
 S       1    1 0 0 0 0 0     271     1675   0.162   0.012   0.174     291
 W       3    0 0 3 0 0 0    1001     5340   0.187   0.037   0.224    1196
                                         LT = 0.131
TOTALS   9                   2989            0.888                    3476
                                      1 - 0.888 = 0.112 /  9 = 0.012
                                                             V/C = 0.860
                             EXISTING + APPROVED   LEVEL OF SERVICE =   D
-------------------------------------------------------------------------
 N       3    0 0 2 1 0 0    1186     5289   0.224   0.016   0.240    1269
 E       2    2 0 0 0 0 0     601     3015   0.199   0.011   0.210     633
 S       1    1 0 0 0 0 0     340     1675   0.203   0.005   0.208     348
 W       3    0 0 3 0 0 0    1038     5340   0.194   0.016   0.210    1121
                                         LT = 0.131
TOTALS   9                   3165            0.951                    3371
                                      1 - 0.951 = 0.049 /  9 = 0.005
                                                             V/C = 0.939
                   EXISTING + APPROVED + PROJECT   LEVEL OF SERVICE =   E
=========================================================================
( 3165 - 2989 )/ 2989 =   5.89 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

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```
                              LEVEL OF SERVICE ANALYSIS
===========================================================================
LOCATION:       WINCHESTER & STEVENS CREEK
MESSAGE:        CUMULATIVE CONDITIONS  SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:      PM          MITIGATION N-S      65.50    8.50
COUNT DATE:     7/10/97                E-W      51.00    9.00
ANAL. DATE:     7/2/97
ANAL. INIT:     RD                     CYCLE LENGTH =  134
GROWTH FACTOR % :   0.0                LOST TIME    =  0.131
-------------------------------------------------------------------------
LEG  PATTERN     LANE             APPROVED     PROJECT           TOTAL
                COUNTS              TRIPS        TRIPS             TRIPS
     LSTSRO    LT  THRU   RT    LT THRU  RT    LT THRU RT     LT  THRU   RT
N    202100   306   940  191    68    4   0     0  51   0    374   995  191
E    203010   572   882  204    10    0  76    19  37   0    601   919  280
S    202010   267   517  439     4   12  35    69  51  19    340   580  493
W    203010   252  1001  281     0    0   2     0  37  93    252  1038  376
=========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
              L S T S R O                              LANE     G/C
=========================================================================
 N      3     0 0 2 1 0 0    1131     5287    0.214   0.057   0.271    1433
 E      2     2 0 0 0 0 0     572     3015    0.190   0.038   0.228     687
 S      2     2 0 0 0 0 0     267     3015    0.089   0.038   0.127     383
 W      3     0 0 3 0 0 0    1001     5340    0.187   0.057   0.244    1303
                                          LT = 0.131
TOTALS 10                    2971             0.811                    3806
                                      1 - 0.811 = 0.189 / 10 = 0.019
                                                               V/C = 0.781
                                EXISTING          LEVEL OF SERVICE =   C
-------------------------------------------------------------------------
 N      3     0 0 2 1 0 0    1135     5287    0.215   0.055   0.270    1427
 E      2     2 0 0 0 0 0     582     3015    0.193   0.037   0.230     693
 S      2     2 0 0 0 0 0     271     3015    0.090   0.037   0.127     383
 W      3     0 0 3 0 0 0    1001     5340    0.187   0.055   0.242    1292
                                          LT = 0.131
TOTALS 10                    2989             0.816                    3795
                                      1 - 0.816 = 0.184 / 10 = 0.018
                                                               V/C = 0.788
                             EXISTING + APPROVED    LEVEL OF SERVICE =   C
-------------------------------------------------------------------------
 N      3     0 0 2 1 0 0    1186     5289    0.224   0.042   0.266    1407
 E      2     2 0 0 0 0 0     601     3015    0.199   0.028   0.227     684
 S      2     2 0 0 0 0 0     340     3015    0.113   0.028   0.141     425
 W      3     0 0 3 0 0 0    1038     5340    0.194   0.042   0.236    1260
                                          LT = 0.131
TOTALS 10                    3165             0.861                    3776
                                      1 - 0.861 = 0.139 / 10 = 0.014
                                                               V/C = 0.838
                   EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   D
=========================================================================
( 3165 - 2989 )/ 2989 =   5.89 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

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                              LEVEL OF SERVICE ANALYSIS
=========================================================================
LOCATION:       WINCHESTER & STEVENS CREEK
MESSAGE:        PROJECT CONDITIONS        SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:      SATURDAY PEAK             N-S      65.50     8.50
COUNT DATE:     7/19/97                   E-W      51.00     9.00
ANAL. DATE:     7/2/97
ANAL. INIT:     RD                        CYCLE LENGTH =  134
GROWTH FACTOR % :    0.0                  LOST TIME    =  0.131
-----------------------------------------------------------------------
LEG  PATTERN       LANE            APPROVED       PROJECT           TOTAL
                  COUNTS             TRIPS         TRIPS            TRIPS
      LSTSRO    LT   THRU   RT    LT THRU  RT    LT THRU  RT     LT  THRU   RT
 N    102100   276    716  277    68    4   0     0   34   0    344   754  277
 E    203010   554   1094  173    10    0  76     0    0   0    564  1094  249
 S    102010   332    582  650     4   12  35    70   34   0    406   628  685
 W    203010   242    852  378     0    0   2     0    0  94    242   852  474
=======================================================================
LEG  # LANES   CRIT. MOVE    C. VOL.   T. CAP.    G/C     ADJ./    ADJ.    C. CAP.
               L S T S R O                                 LANE     G/C
=======================================================================
 N      3      0 0 2 1 0 0     993      5271     0.188    0.046   0.234    1233
 E      2      2 0 0 0 0 0     554      3015     0.184    0.031   0.215     648
 S      1      1 0 0 0 0 0     332      1675     0.198    0.015   0.213     357
 W      3      0 0 3 0 0 0     852      5340     0.160    0.046   0.206    1100
                                              LT = 0.131
TOTALS  9                     2731               0.861                     3338
                                           1 - 0.861 = 0.139 /   9 = 0.015
                                                                 V/C = 0.818
                                       EXISTING         LEVEL OF SERVICE =   D
-----------------------------------------------------------------------
 N      3      0 0 2 1 0 0     997      5271     0.189    0.044   0.233    1228
 E      2      2 0 0 0 0 0     564      3015     0.187    0.029   0.216     651
 S      1      1 0 0 0 0 0     336      1675     0.201    0.015   0.216     362
 W      3      0 0 3 0 0 0     852      5340     0.160    0.044   0.204    1089
                                              LT = 0.131
TOTALS  9                     2749               0.868                     3330
                                           1 - 0.868 = 0.132 /   9 = 0.015
                                                                 V/C = 0.826
                                  EXISTING + APPROVED    LEVEL OF SERVICE =   D
-----------------------------------------------------------------------
 N      3      0 0 2 1 0 0    1031      5272     0.196    0.028   0.224    1181
 E      2      2 0 0 0 0 0     564      3015     0.187    0.019   0.206     621
 S      1      1 0 0 0 0 0     406      1675     0.242    0.009   0.251     420
 W      3      0 0 3 0 0 0     852      5340     0.160    0.028   0.188    1004
                                              LT = 0.131
TOTALS  9                     2853               0.916                     3226
                                           1 - 0.916 = 0.084 /   9 = 0.009
                                                                 V/C = 0.884
                        EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   D
=======================================================================
( 2853 - 2749 )/ 2749 =    3.78 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

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```
                              LEVEL OF SERVICE ANALYSIS
==============================================================================
LOCATION:      WINCHESTER & STEVENS CREEK
MESSAGE:       CUMULATIVE CONDITIONS  SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:     SATURDAY PEAK          N-S     65.50    8.50
COUNT DATE:    7/19/97                E-W     51.00    9.00
ANAL. DATE:    7/2/97
ANAL. INIT:    RD                     CYCLE LENGTH =  134
GROWTH FACTOR % :    0.0              LOST TIME    =  0.131
----------------------------------------------------------------------------
LEG  PATTERN       LANE             APPROVED      PROJECT            TOTAL
                  COUNTS              TRIPS        TRIPS             TRIPS
     LSTSRO     LT  THRU   RT     LT THRU  RT    LT THRU RT      LT  THRU   RT
 N   102100    276   716  277     68    4   0     0  56   0     344   776  277
 E   203010    554  1094  173     10    0  76    24  46   0     588  1140  249
 S   102010    332   582  650      4   12  35    70  56  24     406   650  709
 W   203010    242   852  378      0    0   2     0  46  94     242   898  474
============================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./   ADJ.   C. CAP.
              L S T S R O                            LANE    G/C
============================================================================
 N      3     0 0 2 1 0 0     993     5271   0.188   0.046   0.234    1233
 E      2     2 0 0 0 0 0     554     3015   0.184   0.031   0.215     648
 S      1     1 0 0 0 0 0     332     1675   0.198   0.015   0.213     357
 W      3     0 0 3 0 0 0     852     5340   0.160   0.046   0.206    1100
                                        LT = 0.131
TOTALS  9                    2731             0.861                    3338
                                   1 - 0.861 = 0.139 /  9 = 0.015
                                                           V/C = 0.818
                             EXISTING            LEVEL OF SERVICE =   D
----------------------------------------------------------------------------
 N      3     0 0 2 1 0 0     997     5271   0.189   0.044   0.233    1228
 E      2     2 0 0 0 0 0     564     3015   0.187   0.029   0.216     651
 S      1     1 0 0 0 0 0     336     1675   0.201   0.015   0.216     362
 W      3     0 0 3 0 0 0     852     5340   0.160   0.044   0.204    1089
                                        LT = 0.131
TOTALS  9                    2749             0.868                    3330
                                   1 - 0.868 = 0.132 /  9 = 0.015
                                                           V/C = 0.826
                        EXISTING + APPROVED      LEVEL OF SERVICE =   D
----------------------------------------------------------------------------
 N      3     0 0 2 1 0 0    1053     5273   0.200   0.021   0.221    1165
 E      2     2 0 0 0 0 0     588     3015   0.195   0.014   0.209     630
 S      1     1 0 0 0 0 0     406     1675   0.242   0.007   0.249     417
 W      3     0 0 3 0 0 0     898     5340   0.168   0.021   0.189    1009
                                        LT = 0.131
TOTALS  9                    2945             0.936                    3221
                                   1 - 0.936 = 0.064 /  9 = 0.007
                                                           V/C = 0.914
               EXISTING + APPROVED + PROJECT     LEVEL OF SERVICE =   E
============================================================================
( 2945 - 2749 )/ 2749 =   7.13 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

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                        LEVEL OF SERVICE ANALYSIS
==========================================================================
LOCATION:      WINCHESTER & STEVENS CREEK
MESSAGE:       CUMULATIVE CONDTIONS   SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:     SATURDAY PEAK [illegible]N-S      65.50     8.50
COUNT DATE:    7/19/97                E-W      51.00     9.00
ANAL. DATE:    7/2/97
ANAL. INIT:    RD                     CYCLE LENGTH =  134
GROWTH FACTOR % :    0.0              LOST TIME    =  0.131
------------------------------------------------------------------------
LEG  PATTERN      LANE            APPROVED     PROJECT          TOTAL
                 COUNTS             TRIPS        TRIPS           TRIPS
     LSTSRO    LT   THRU   RT    LT THRU  RT    LT THRU RT     LT  THRU  RT
 N   202100   276   716  277    68    4    0     0  56   0    344   776 277
 E   203010   554  1094  173    10    0   76    24  46   0    588  1140 249
 S   202010   332   582  650     4   12   35    70  56  24    406   650 709
 W   203010   242   852  378     0    0    2     0  46  94    242   898 474
========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
              L S T S R O                             LANE     G/C
========================================================================
 N      3     0 0 2 1 0 0    993     5271    0.188   0.068   0.256   1349
 E      2     2 0 0 0 0 0    554     3015    0.184   0.045   0.229    690
 S      2     2 0 0 0 0 0    332     3015    0.110   0.045   0.155    467
 W      3     0 0 3 0 0 0    852     5340    0.160   0.068   0.228   1218
                                            LT = 0.131
TOTALS 10                   2731              0.773                  3724
                                          1 - 0.773 = 0.227 / 10 = 0.023
                                                               V/C = 0.733
                               EXISTING         LEVEL OF SERVICE =   C
------------------------------------------------------------------------
 N      3     0 0 2 1 0 0    997     5271    0.189   0.067   0.256   1349
 E      2     2 0 0 0 0 0    564     3015    0.187   0.044   0.231    696
 S      2     2 0 0 0 0 0    336     3015    0.111   0.044   0.155    467
 W      3     0 0 3 0 0 0    852     5340    0.160   0.067   0.227   1212
                                            LT = 0.131
TOTALS 10                   2749              0.778                  3724
                                          1 - 0.778 = 0.222 / 10 = 0.022
                                                               V/C = 0.738
                            EXISTING + APPROVED     LEVEL OF SERVICE =   C
------------------------------------------------------------------------
 N      3     0 0 2 1 0 0   1053     5273    0.200   0.051   0.251   1324
 E      2     2 0 0 0 0 0    588     3015    0.195   0.034   0.229    690
 S      2     2 0 0 0 0 0    406     3015    0.135   0.034   0.169    510
 W      3     0 0 3 0 0 0    898     5340    0.168   0.051   0.219   1169
                                            LT = 0.131
TOTALS 10                   2945              0.829                  3693
                                          1 - 0.829 = 0.171 / 10 = 0.017
                                                               V/C = 0.797
                    EXISTING + APPROVED + PROJECT     LEVEL OF SERVICE =   C
========================================================================
( 2945 - 2749 )/ 2749 =    7.13 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
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```
                              LEVEL OF SERVICE ANALYSIS
===========================================================================
LOCATION:        WINCHESTER & TISCH
MESSAGE:         PROJECT CONDITIONS     SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:       AM                     N-S      125.00    10.00
COUNT DATE:      4/16/97                E-W       35.00     4.00
ANAL. DATE:      7/2/97
ANAL. INIT:      RD                     CYCLE LENGTH =  174
GROWTH FACTOR % :     0.0               LOST TIME    =  0.080
-------------------------------------------------------------------------
LEG  PATTERN        LANE          APPROVED     PROJECT          TOTAL
                   COUNTS           TRIPS       TRIPS            TRIPS
     LSTSRO     LT  THRU   RT    LT THRU  RT   LT THRU RT     LT  THRU   RT
 N   102100     55   352  166     0   26   7    0   4 108     55   382  281
 E   100002     40    16   17    34    0   0    0   0   0     74    16   17
 S   102100    531  1539  414    37   16   0    0  64   0    568  1619  414
 W   000000      0     0    0     0    0   0    0   0   0      0     0    0
=========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
              L S T S R O                             LANE     G/C
=========================================================================
 N     3      0 0 2 1 0 0     518     5266   0.098   0.241   0.339    1785
 E     2      1 0 0 0 0 2      73     3105   0.024   0.160   0.184     571
 S     1      1 0 0 0 0 0     531     1675   0.317   0.080   0.397     665
 W     0      0 0 0 0 0 0       0        0   0.000   0.000   0.000       0
                                        LT = 0.080
TOTALS  6                    1122            0.519                    3021
                                    1 - 0.519 = 0.481 /  6 = 0.080
                                                             V/C = 0.371
                             EXISTING            LEVEL OF SERVICE =   A
-------------------------------------------------------------------------
 N     3      0 0 2 1 0 0     551     5267   0.105   0.220   0.325    1712
 E     2      1 0 0 0 0 2     107     3086   0.035   0.147   0.182     562
 S     1      1 0 0 0 0 0     568     1675   0.339   0.073   0.412     690
 W     0      0 0 0 0 0 0       0        0   0.000   0.000   0.000       0
                                        LT = 0.080
TOTALS  6                    1226            0.559                    2964
                                    1 - 0.559 = 0.441 /  6 = 0.073
                                                             V/C = 0.414
                         EXISTING + APPROVED     LEVEL OF SERVICE =   A
-------------------------------------------------------------------------
 N     3      0 0 2 1 0 0     663     5257   0.126   0.210   0.336    1766
 E     2      1 0 0 0 0 2     107     3086   0.035   0.140   0.175     540
 S     1      1 0 0 0 0 0     568     1675   0.339   0.070   0.409     685
 W     0      0 0 0 0 0 0       0        0   0.000   0.000   0.000       0
                                        LT = 0.080
TOTALS  6                    1338            0.580                    2991
                                    1 - 0.580 = 0.420 /  6 = 0.070
                                                             V/C = 0.447
                  EXISTING + APPROVED + PROJECT     LEVEL OF SERVICE =   A
=========================================================================
( 1338 - 1226 )/ 1226 =    9.14 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                              LEVEL OF SERVICE ANALYSIS
=============================================================================
LOCATION:       WINCHESTER & TISCH
MESSAGE:        CUMULATIVE CONDITIONS  SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:      AM                     N-S      125.00    10.00
COUNT DATE:     4/16/97                E-W       35.00     4.00
ANAL. DATE:     7/2/97
ANAL. INIT:     RD                     CYCLE LENGTH =  174
GROWTH FACTOR % :     0.0              LOST TIME    =  0.080
---------------------------------------------------------------------------
LEG  PATTERN      LANE             APPROVED     PROJECT          TOTAL
                 COUNTS              TRIPS        TRIPS            TRIPS
     LSTSRO    LT  THRU   RT     LT THRU  RT    LT THRU RT      LT  THRU   RT
N    102100    55   352  166      0   26   7     0   7 111      55   385  284
E    100002    40    16   17     34    0   0     0   0   0      74    16   17
S    102100   531  1539  414     37   16   0     0  75   0     568  1630  414
W    000000     0     0    0      0    0   0     0   0   0       0     0    0
===========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
              L S T S R O                             LANE     G/C
===========================================================================
 N      3     0 0 2 1 0 0    518     5266    0.098   0.241   0.339    1785
 E      2     1 0 0 0 0 2     73     3105    0.024   0.160   0.184     571
 S      1     1 0 0 0 0 0    531     1675    0.317   0.080   0.397     665
 W      0     0 0 0 0 0 0      0        0    0.000   0.000   0.000       0
                                         LT = 0.080
TOTALS  6                   1122             0.519                    3021
                                     1 - 0.519 = 0.481 /   6 = 0.080
                                                          V/C = 0.371
                                EXISTING          LEVEL OF SERVICE =   A
---------------------------------------------------------------------------
 N      3     0 0 2 1 0 0    551     5267    0.105   0.220   0.325    1712
 E      2     1 0 0 0 0 2    107     3086    0.035   0.147   0.182     562
 S      1     1 0 0 0 0 0    568     1675    0.339   0.073   0.412     690
 W      0     0 0 0 0 0 0      0        0    0.000   0.000   0.000       0
                                         LT = 0.080
TOTALS  6                   1226             0.559                    2964
                                     1 - 0.559 = 0.441 /   6 = 0.073
                                                          V/C = 0.414
                           EXISTING + APPROVED    LEVEL OF SERVICE =   A
---------------------------------------------------------------------------
 N      3     0 0 2 1 0 0    669     5257    0.127   0.209   0.336    1766
 E      2     1 0 0 0 0 2    107     3086    0.035   0.140   0.175     540
 S      1     1 0 0 0 0 0    568     1675    0.339   0.070   0.409     685
 W      0     0 0 0 0 0 0      0        0    0.000   0.000   0.000       0
                                         LT = 0.080
TOTALS  6                   1344             0.581                    2991
                                     1 - 0.581 = 0.419 /   6 = 0.070
                                                          V/C = 0.449
                 EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   A
===========================================================================
( 1344 - 1226 )/ 1226 =   9.62 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                          LEVEL OF SERVICE ANALYSIS
==========================================================================
LOCATION:      WINCHESTER & TISCH
MESSAGE:       PROJECT CONDITIONS       SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:     PM                       N-S      95.00    6.50
COUNT DATE:    4/16/97                  E-W      20.00    3.00
ANAL. DATE:    7/2/97
ANAL. INIT:    RD                       CYCLE LENGTH =  124.5
GROWTH FACTOR % :    0.0                LOST TIME    =  0.076
-----------------------------------------------------------------------
LEG  PATTERN      LANE           APPROVED      PROJECT         TOTAL
                 COUNTS           TRIPS         TRIPS          TRIPS
     LSTSRO     LT  THRU   RT    LT THRU  RT   LT THRU RT    LT  THRU   RT
 N   102100     42  1259  305     0   16   5    0  30  83    42  1305  393
 E   100002    306    91   49    57    0   0    0   0   0   363    91   49
 S   102100    333  1049  132    34   51   0    0 154   0   367  1254  132
 W   000000      0     0    0     0    0   0    0   0   0     0     0    0
=======================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./   ADJ.   C. CAP.
               L S T S R O                            LANE    G/C
=======================================================================
 N      3     0 0 2 1 0 0    1564     5282   0.296   0.143   0.439    2319
 E      2     1 0 0 0 0 2     446     3110   0.143   0.095   0.238     740
 S      1     1 0 0 0 0 0     333     1675   0.199   0.048   0.247     414
 W      0     0 0 0 0 0 0       0        0   0.000   0.000   0.000       0
                                        LT = 0.076
TOTALS  6                    2343            0.714                    3473
                                    1 - 0.714 = 0.286 /  6 = 0.048
                                                            V/C = 0.675
                             EXISTING          LEVEL OF SERVICE =   B
-----------------------------------------------------------------------
 N      3     0 0 2 1 0 0    1585     5282   0.300   0.122   0.422    2229
 E      2     1 0 0 0 0 2     503     3103   0.162   0.081   0.243     754
 S      1     1 0 0 0 0 0     367     1675   0.219   0.041   0.260     435
 W      0     0 0 0 0 0 0       0        0   0.000   0.000   0.000       0
                                        LT = 0.076
TOTALS  6                    2455            0.757                    3418
                                    1 - 0.757 = 0.243 /  6 = 0.041
                                                            V/C = 0.718
                         EXISTING + APPROVED   LEVEL OF SERVICE =   C
-----------------------------------------------------------------------
 N      3     0 0 2 1 0 0    1698     5277   0.322   0.111   0.433    2285
 E      2     1 0 0 0 0 2     503     3103   0.162   0.074   0.236     732
 S      1     1 0 0 0 0 0     367     1675   0.219   0.037   0.256     429
 W      0     0 0 0 0 0 0       0        0   0.000   0.000   0.000       0
                                        LT = 0.076
TOTALS  6                    2568            0.779                    3446
                                    1 - 0.779 = 0.221 /  6 = 0.037
                                                            V/C = 0.745
                EXISTING + APPROVED + PROJECT  LEVEL OF SERVICE =   C
=======================================================================
( 2568 - 2455 )/ 2455 =   4.60 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                          LEVEL OF SERVICE ANALYSIS
===========================================================================
LOCATION:        WINCHESTER & TISCH
MESSAGE:         CUMULATIVE CONDITIONS  SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:       PM                     N-S      95.00    6.50
COUNT DATE:      4/16/97                E-W      20.00    3.00
ANAL. DATE:      7/2/97
ANAL. INIT:      RD                     CYCLE LENGTH =  124.5
GROWTH FACTOR % :     0.0               LOST TIME    =  0.076
--------------------------------------------------------------------------
LEG  PATTERN       LANE            APPROVED      PROJECT          TOTAL
                  COUNTS             TRIPS        TRIPS           TRIPS
     LSTSRO     LT  THRU   RT     LT THRU  RT   LT THRU RT     LT  THRU   RT
 N   102100     42  1259  305      0   16   5    0  49 101     42  1324  411
 E   100002    306    91   49     57    0   0    0   0   0    363    91   49
 S   102100    333  1049  132     34   51   0    0 191   0    367  1291  132
 W   000000      0     0    0      0    0   0    0   0   0      0     0    0
==========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
              L S T S R O                             LANE     G/C
==========================================================================
 N      3     0 0 2 1 0 0    1564     5282   0.296   0.143   0.439    2319
 E      2     1 0 0 0 0 2     446     3110   0.143   0.095   0.238     740
 S      1     1 0 0 0 0 0     333     1675   0.199   0.048   0.247     414
 W      0     0 0 0 0 0 0       0        0   0.000   0.000   0.000       0
                                         LT = 0.076
TOTALS  6                    2343            0.714                    3473
                                      1 - 0.714 = 0.286 /  6 = 0.048
                                                              V/C = 0.675
                               EXISTING           LEVEL OF SERVICE =   B
--------------------------------------------------------------------------
 N      3     0 0 2 1 0 0    1585     5282   0.300   0.122   0.422    2229
 E      2     1 0 0 0 0 2     503     3103   0.162   0.081   0.243     754
 S      1     1 0 0 0 0 0     367     1675   0.219   0.041   0.260     435
 W      0     0 0 0 0 0 0       0        0   0.000   0.000   0.000       0
                                         LT = 0.076
TOTALS  6                    2455            0.757                    3418
                                      1 - 0.757 = 0.243 /  6 = 0.041
                                                              V/C = 0.718
                         EXISTING + APPROVED      LEVEL OF SERVICE =   C
--------------------------------------------------------------------------
 N      3     0 0 2 1 0 0    1735     5276   0.329   0.107   0.436    2300
 E      2     1 0 0 0 0 2     503     3103   0.162   0.071   0.233     723
 S      1     1 0 0 0 0 0     367     1675   0.219   0.036   0.255     427
 W      0     0 0 0 0 0 0       0        0   0.000   0.000   0.000       0
                                         LT = 0.076
TOTALS  6                    2605            0.786                    3450
                                      1 - 0.786 = 0.214 /  6 = 0.036
                                                              V/C = 0.755
                 EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   C
==========================================================================
( 2605 - 2455 )/ 2455 =   6.11 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

```
                         LEVEL OF SERVICE ANALYSIS
==========================================================================
LOCATION:       WINCHESTER & TISCH
MESSAGE:        PROJECT CONDITIONS      SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:      SATURDAY PEAK           N-S       95.00     6.50
COUNT DATE:     9/27/97                 E-W       20.00     3.00
ANAL. DATE:     7/2/97
ANAL. INIT:     RD                      CYCLE LENGTH =  124.5
GROWTH FACTOR % :     0.0               LOST TIME    =  0.076
------------------------------------------------------------------------
LEG  PATTERN        LANE          APPROVED     PROJECT          TOTAL
                   COUNTS           TRIPS        TRIPS           TRIPS
     LSTSRO     LT   THRU   RT    LT THRU  RT   LT THRU RT     LT  THRU   RT
 N   102100     25   1242  366     0   16   5    0  31  83     25  1289  454
 E   100002    108     40   26    57    0   0    0   0   0    165    40   26
 S   102100    283   1374  148    34   51   0    0 155   0    317  1580  148
 W   000000      0      0    0     0    0   0    0   0   0      0     0    0
========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
              L S T S R O                            LANE     G/C
========================================================================
 N      3     0 0 2 1 0 0    1608     5277   0.305   0.197   0.502    2649
 E      2     1 0 0 0 0 2     174     3116   0.056   0.131   0.187     583
 S      1     1 0 0 0 0 0     283     1675   0.169   0.066   0.235     394
 W      0     0 0 0 0 0 0       0        0   0.000   0.000   0.000       0
                                        LT = 0.076
TOTALS  6                    2065            0.606                    3626
                                     1 - 0.606 = 0.394 /  6 = 0.066
                                                           V/C = 0.569
                              EXISTING          LEVEL OF SERVICE =   A
------------------------------------------------------------------------
 N      3     0 0 2 1 0 0    1629     5277   0.309   0.176   0.485    2559
 E      2     1 0 0 0 0 2     231     3098   0.075   0.117   0.192     595
 S      1     1 0 0 0 0 0     317     1675   0.189   0.059   0.248     415
 W      0     0 0 0 0 0 0       0        0   0.000   0.000   0.000       0
                                        LT = 0.076
TOTALS  6                    2177            0.649                    3569
                                     1 - 0.649 = 0.351 /  6 = 0.059
                                                           V/C = 0.610
                         EXISTING + APPROVED    LEVEL OF SERVICE =   B
------------------------------------------------------------------------
 N      3     0 0 2 1 0 0    1743     5273   0.331   0.165   0.496    2615
 E      2     1 0 0 0 0 2     231     3098   0.075   0.110   0.185     573
 S      1     1 0 0 0 0 0     317     1675   0.189   0.055   0.244     409
 W      0     0 0 0 0 0 0       0        0   0.000   0.000   0.000       0
                                        LT = 0.076
TOTALS  6                    2291            0.671                    3597
                                     1 - 0.671 = 0.329 /  6 = 0.055
                                                           V/C = 0.637
                EXISTING + APPROVED + PROJECT   LEVEL OF SERVICE =   B
========================================================================
( 2291 - 2177 )/ 2177 =   5.24 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                         LEVEL OF SERVICE ANALYSIS
==========================================================================
LOCATION:      WINCHESTER & TISCH
MESSAGE:       CUMULATIVE CONDITIONS  SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:     SATURDAY PEAK          N-S      95.00    6.50
COUNT DATE:    9/27/97                E-W      20.00    3.00
ANAL. DATE:    7/2/97
ANAL. INIT:    RD                     CYCLE LENGTH =  124.5
GROWTH FACTOR % :     0.0             LOST TIME    =  0.076
-----------------------------------------------------------------------
LEG  PATTERN      LANE            APPROVED     PROJECT         TOTAL
                 COUNTS             TRIPS        TRIPS          TRIPS
     LSTSRO    LT  THRU   RT     LT THRU  RT    LT THRU RT     LT  THRU   RT
 N   102100    25  1242  366      0   16   5     0  55 105     25  1313  476
 E   100002   108    40   26     57    0   0     0   0   0    165    40   26
 S   102100   283  1374  148     34   51   0     0 201   0    317  1626  148
 W   000000     0     0    0      0    0   0     0   0   0      0     0    0
=======================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./   ADJ.   C. CAP.
              L S T S R O                             LANE    G/C
=======================================================================
 N      3     0 0 2 1 0 0    1608    5277   0.305   0.197   0.502    2649
 E      2     1 0 0 0 0 2     174    3116   0.056   0.131   0.187     583
 S      1     1 0 0 0 0 0     283    1675   0.169   0.066   0.235     394
 W      0     0 0 0 0 0 0       0       0   0.000   0.000   0.000       0
                                         LT = 0.076
TOTALS  6                    2065           0.606                    3626
                                     1 - 0.606 = 0.394 /   6 = 0.066
                                                          V/C = 0.569
                              EXISTING            LEVEL OF SERVICE =   A
-----------------------------------------------------------------------
 N      3     0 0 2 1 0 0    1629    5277   0.309   0.176   0.485    2559
 E      2     1 0 0 0 0 2     231    3098   0.075   0.117   0.192     595
 S      1     1 0 0 0 0 0     317    1675   0.189   0.059   0.248     415
 W      0     0 0 0 0 0 0       0       0   0.000   0.000   0.000       0
                                         LT = 0.076
TOTALS  6                    2177           0.649                    3569
                                     1 - 0.649 = 0.351 /   6 = 0.059
                                                          V/C = 0.610
                         EXISTING + APPROVED      LEVEL OF SERVICE =   B
-----------------------------------------------------------------------
 N      3     0 0 2 1 0 0    1789    5272   0.339   0.161   0.500    2636
 E      2     1 0 0 0 0 2     231    3098   0.075   0.107   0.182     564
 S      1     1 0 0 0 0 0     317    1675   0.189   0.054   0.243     407
 W      0     0 0 0 0 0 0       0       0   0.000   0.000   0.000       0
                                         LT = 0.076
TOTALS  6                    2337           0.679                    3607
                                     1 - 0.679 = 0.321 /   6 = 0.054
                                                          V/C = 0.648
               EXISTING + APPROVED + PROJECT      LEVEL OF SERVICE =   B
=======================================================================
( 2337 - 2177 )/ 2177 =   7.35 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                         LEVEL OF SERVICE ANALYSIS
===========================================================================
LOCATION:      WINCHESTER & WILLIAMS
MESSAGE:       PROJECT CONDITIONS      SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:     AM                      N-S      110.00    8.50
COUNT DATE:    4/16/97                 E-W       40.00    4.50
ANAL. DATE:    7/2/97
ANAL. INIT:    RD                      CYCLE LENGTH =  163
GROWTH FACTOR % :    0.0               LOST TIME    =  0.080
-------------------------------------------------------------------------
LEG  PATTERN      LANE             APPROVED     PROJECT          TOTAL
                 COUNTS              TRIPS        TRIPS            TRIPS
     LSTSRO     LT  THRU   RT    LT THRU  RT    LT THRU RT     LT  THRU   RT
 N   103010     53   569   74     0    0   0     1   1   1     54   570   75
 E   101010     68   100   61     0    0   0     0   0   1     68   100   62
 S   102010     83  1464   62     0    0   0     0   3   0     83  1467   62
 W   101010    279   108  163     0    0   0     1   0   0    280   108  163
=========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./   ADJ.   C. CAP.
              L S T S R O                             LANE    G/C
=========================================================================
 N      1     1 0 0 0 0 0      53     1675   0.032   0.051   0.083     139
 E      1     0 0 1 0 0 0     100     1780   0.056   0.051   0.107     190
 S      2     0 0 2 0 0 0    1464     3560   0.411   0.102   0.513    1826
 W      1     1 0 0 0 0 0     279     1675   0.167   0.051   0.218     365
                                        LT = 0.080
TOTALS  5                    1896            0.746                      2520
                                 1 - 0.746 = 0.254 /  5 = 0.051
                                                             V/C = 0.752
                              EXISTING          LEVEL OF SERVICE =   C
-------------------------------------------------------------------------
 N      1     1 0 0 0 0 0      53     1675   0.032   0.051   0.083     139
 E      1     0 0 1 0 0 0     100     1780   0.056   0.051   0.107     190
 S      2     0 0 2 0 0 0    1464     3560   0.411   0.102   0.513    1826
 W      1     1 0 0 0 0 0     279     1675   0.167   0.051   0.218     365
                                        LT = 0.080
TOTALS  5                    1896            0.746                      2520
                                 1 - 0.746 = 0.254 /  5 = 0.051
                                                             V/C = 0.752
                         EXISTING + APPROVED    LEVEL OF SERVICE =   C
-------------------------------------------------------------------------
 N      1     1 0 0 0 0 0      54     1675   0.032   0.051   0.083     139
 E      1     0 0 1 0 0 0     100     1780   0.056   0.051   0.107     190
 S      2     0 0 2 0 0 0    1467     3560   0.412   0.101   0.513    1826
 W      1     1 0 0 0 0 0     280     1675   0.167   0.051   0.218     365
                                        LT = 0.080
TOTALS  5                    1901            0.747                      2520
                                 1 - 0.747 = 0.253 /  5 = 0.051
                                                             V/C = 0.754
                EXISTING + APPROVED + PROJECT     LEVEL OF SERVICE =   C
=========================================================================
( 1901 - 1896 )/ 1896 =    0.26 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                         LEVEL OF SERVICE ANALYSIS
==========================================================================
LOCATION:      WINCHESTER & WILLIAMS
MESSAGE:       CUMULATIVE CONDITIONS  SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:     AM                     N-S     110.00    8.50
COUNT DATE:    4/16/97                E-W      40.00    4.50
ANAL. DATE:    7/2/97
ANAL. INIT:    RD                     CYCLE LENGTH =  163
GROWTH FACTOR % :    0.0              LOST TIME    =  0.080
-------------------------------------------------------------------------
LEG  PATTERN      LANE          APPROVED     PROJECT         TOTAL
                 COUNTS          TRIPS        TRIPS          TRIPS
     LSTSRO   LT  THRU   RT   LT THRU  RT   LT THRU RT    LT  THRU   RT
 N   103010   53   569   74    0    0   0    2    2  1    55   571   75
 E   101010   68   100   61    0    0   0    0    0  2    68   100   63
 S   102010   83  1464   62    0    0   0    0    6  0    83  1470   62
 W   101010  279   108  163    0    0   0    2    0  0   281   108  163
=========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./   ADJ.  C. CAP.
              L S T S R O                             LANE    G/C
=========================================================================
 N      1     1 0 0 0 0 0      53     1675   0.032   0.051   0.083    139
 E      1     0 0 1 0 0 0     100     1780   0.056   0.051   0.107    190
 S      2     0 0 2 0 0 0    1464     3560   0.411   0.102   0.513   1826
 W      1     1 0 0 0 0 0     279     1675   0.167   0.051   0.218    365
                                       LT = 0.080
TOTALS  5                    1896            0.746                   2520
                                   1 - 0.746 = 0.254 /  5 = 0.051
                                                            V/C = 0.752
                             EXISTING           LEVEL OF SERVICE =   C
-------------------------------------------------------------------------
 N      1     1 0 0 0 0 0      53     1675   0.032   0.051   0.083    139
 E      1     0 0 1 0 0 0     100     1780   0.056   0.051   0.107    190
 S      2     0 0 2 0 0 0    1464     3560   0.411   0.102   0.513   1826
 W      1     1 0 0 0 0 0     279     1675   0.167   0.051   0.218    365
                                       LT = 0.080
TOTALS  5                    1896            0.746                   2520
                                   1 - 0.746 = 0.254 /  5 = 0.051
                                                            V/C = 0.752
                         EXISTING + APPROVED    LEVEL OF SERVICE =   C
-------------------------------------------------------------------------
 N      1     1 0 0 0 0 0      55     1675   0.033   0.050   0.083    139
 E      1     0 0 1 0 0 0     100     1780   0.056   0.050   0.106    189
 S      2     0 0 2 0 0 0    1470     3560   0.413   0.100   0.513   1826
 W      1     1 0 0 0 0 0     281     1675   0.168   0.050   0.218    365
                                       LT = 0.080
TOTALS  5                    1906            0.750                   2519
                                   1 - 0.750 = 0.250 /  5 = 0.050
                                                            V/C = 0.757
                  EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   C
=========================================================================
( 1906 - 1896 )/ 1896 =   0.53 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                              LEVEL OF SERVICE ANALYSIS
=========================================================================
LOCATION:       WINCHESTER & WILLIAMS
MESSAGE:        PROJECT CONDITIONS        SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:      PM                        N-S     110.00    8.50
COUNT DATE:     4/16/97                   E-W      40.00    4.50
ANAL. DATE:     7/2/97
ANAL. INIT:     RD                        CYCLE LENGTH =  163
GROWTH FACTOR % :    0.0                  LOST TIME    =  0.080
------------------------------------------------------------------------
LEG  PATTERN      LANE            APPROVED       PROJECT           TOTAL
                 COUNTS             TRIPS         TRIPS            TRIPS
     LSTSRO     LT  THRU   RT     LT THRU  RT    LT THRU  RT     LT  THRU   RT
 N   103010     19  1306  192      0    0   0     5    9   5     24  1315  197
 E   101010     65    59   10      0    0   0     0    0   5     65    59   15
 S   102010    118   905   23      0    0   0     0    9   0    118   914   23
 W   101010    177    68  125      0    0   0     5    0   0    182    68  125
========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
              L S T S R O                              LANE    G/C
========================================================================
 N      3     0 0 3 0 0 0    1306     5340   0.245   0.233   0.478    2553
 E      1     0 0 1 0 0 0      59     1780   0.033   0.078   0.111     198
 S      1     1 0 0 0 0 0     118     1675   0.070   0.078   0.148     248
 W      1     1 0 0 0 0 0     177     1675   0.106   0.078   0.184     308
                                         LT = 0.080
TOTALS  6                    1660            0.534                    3307
                                        1 - 0.534 = 0.466 /  6 = 0.078
                                                              V/C = 0.502
                                  EXISTING         LEVEL OF SERVICE =   A
------------------------------------------------------------------------
 N      3     0 0 3 0 0 0    1306     5340   0.245   0.233   0.478    2553
 E      1     0 0 1 0 0 0      59     1780   0.033   0.078   0.111     198
 S      1     1 0 0 0 0 0     118     1675   0.070   0.078   0.148     248
 W      1     1 0 0 0 0 0     177     1675   0.106   0.078   0.184     308
                                         LT = 0.080
TOTALS  6                    1660            0.534                    3307
                                        1 - 0.534 = 0.466 /  6 = 0.078
                                                              V/C = 0.502
                             EXISTING + APPROVED   LEVEL OF SERVICE =   A
------------------------------------------------------------------------
 N      3     0 0 3 0 0 0    1315     5340   0.246   0.231   0.477    2547
 E      1     0 0 1 0 0 0      59     1780   0.033   0.077   0.110     196
 S      1     1 0 0 0 0 0     118     1675   0.070   0.077   0.147     246
 W      1     1 0 0 0 0 0     182     1675   0.109   0.077   0.186     312
                                         LT = 0.080
TOTALS  6                    1674            0.538                    3301
                                        1 - 0.538 = 0.462 /  6 = 0.077
                                                              V/C = 0.507
                    EXISTING + APPROVED + PROJECT  LEVEL OF SERVICE =   A
========================================================================
( 1674 - 1660 )/ 1660 =   0.84 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

```
                        LEVEL OF SERVICE ANALYSIS
===========================================================================
LOCATION:      WINCHESTER & WILLIAMS
MESSAGE:       CUMULATIVE CONDITIONS  SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:     PM                     N-S     110.00    8.50
COUNT DATE:    4/16/97                E-W      40.00    4.50
ANAL. DATE:    7/2/97
ANAL. INIT:    RD                     CYCLE LENGTH =  163
GROWTH FACTOR % :    0.0              LOST TIME    =  0.080
---------------------------------------------------------------------------
LEG  PATTERN       LANE             APPROVED     PROJECT          TOTAL
                  COUNTS             TRIPS        TRIPS           TRIPS
     LSTSRO    LT  THRU   RT     LT THRU  RT   LT THRU RT      LT  THRU   RT
 N   103010    19  1306  192      0    0   0    9  17   8      28  1323  200
 E   101010    65    59   10      0    0   0    0   0   9      65    59   19
 S   102010   118   905   23      0    0   0    0  17   0     118   922   23
 W   101010   177    68  125      0    0   0    8   0   0     185    68  125
===========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
              L S T S R O                              LANE    G/C
===========================================================================
 N       3    0 0 3 0 0 0    1306    5340   0.245   0.233   0.478    2553
 E       1    0 0 1 0 0 0      59    1780   0.033   0.078   0.111     198
 S       1    1 0 0 0 0 0     118    1675   0.070   0.078   0.148     248
 W       1    1 0 0 0 0 0     177    1675   0.106   0.078   0.184     308
                                       LT = 0.080
TOTALS   6                   1660           0.534                    3307
                                     1 - 0.534 = 0.466 /  6 = 0.078
                                                             V/C = 0.502
                                  EXISTING          LEVEL OF SERVICE =   A
---------------------------------------------------------------------------
 N       3    0 0 3 0 0 0    1306    5340   0.245   0.233   0.478    2553
 E       1    0 0 1 0 0 0      59    1780   0.033   0.078   0.111     198
 S       1    1 0 0 0 0 0     118    1675   0.070   0.078   0.148     248
 W       1    1 0 0 0 0 0     177    1675   0.106   0.078   0.184     308
                                       LT = 0.080
TOTALS   6                   1660           0.534                    3307
                                     1 - 0.534 = 0.466 /  6 = 0.078
                                                             V/C = 0.502
                          EXISTING + APPROVED       LEVEL OF SERVICE =   A
---------------------------------------------------------------------------
 N       3    0 0 3 0 0 0    1323    5340   0.248   0.229   0.477    2547
 E       1    0 0 1 0 0 0      59    1780   0.033   0.076   0.109     194
 S       1    1 0 0 0 0 0     118    1675   0.070   0.076   0.146     245
 W       1    1 0 0 0 0 0     185    1675   0.110   0.076   0.186     312
                                       LT = 0.080
TOTALS   6                   1685           0.541                    3298
                                     1 - 0.541 = 0.459 /  6 = 0.076
                                                             V/C = 0.511
                 EXISTING + APPROVED + PROJECT      LEVEL OF SERVICE =   A
===========================================================================
( 1685 - 1660 )/ 1660 =   1.51 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

```
                            LEVEL OF SERVICE ANALYSIS
==========================================================================
LOCATION:     WINCHESTER & OLSEN
MESSAGE:      PROJECT CONDITIONS       SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:    AM                       N-S      90.00    6.50
COUNT DATE:   4/17/97                  E-W      22.00    3.00
ANAL. DATE:   7/2/97
ANAL. INIT:   RD                       CYCLE LENGTH =  121.5
GROWTH FACTOR % :    0.0               LOST TIME    =  0.078
-------------------------------------------------------------------------
LEG  PATTERN      LANE          APPROVED      PROJECT          TOTAL
                 COUNTS          TRIPS         TRIPS            TRIPS
     LSTSRO    LT  THRU   RT   LT THRU  RT   LT THRU RT     LT  THRU   RT
 N   102100     5   494    9    0   26   0    5   2   0     10   522    9
 E   101010    18     0    8    0    0   0  110   0   3    128     0   11
 S   102100    64  1498   44    0   16   0    0   3  61     64  1517  105
 W   100100     6     0   13    0    0   0    0   0   0      6     0   13
=========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./   ADJ.   C. CAP.
              L S T S R O                            LANE    G/C
=========================================================================
 N      1     1 0 0 0 0 0       5     1675   0.003   0.102   0.105     176
 E      1     1 0 0 0 0 0      18     1675   0.011   0.102   0.113     189
 S      3     0 0 2 1 0 0    1542     5327   0.289   0.306   0.595    3170
 W      1     0 0 0 1 0 0      13     1675   0.008   0.102   0.110     184
                                         LT = 0.078
TOTALS  6                    1578            0.389                    3719
                                       1 - 0.389 = 0.611 /  6 = 0.102
                                                             V/C = 0.424
                                 EXISTING          LEVEL OF SERVICE =   A
-------------------------------------------------------------------------
 N      1     1 0 0 0 0 0       5     1675   0.003   0.101   0.104     174
 E      1     1 0 0 0 0 0      18     1675   0.011   0.101   0.112     188
 S      3     0 0 2 1 0 0    1558     5327   0.292   0.304   0.596    3175
 W      1     0 0 0 1 0 0      13     1675   0.008   0.101   0.109     183
                                         LT = 0.078
TOTALS  6                    1594            0.392                    3720
                                       1 - 0.392 = 0.608 /  6 = 0.101
                                                             V/C = 0.428
                             EXISTING + APPROVED   LEVEL OF SERVICE =   A
-------------------------------------------------------------------------
 N      1     1 0 0 0 0 0      10     1675   0.006   0.088   0.094     157
 E      1     1 0 0 0 0 0     128     1675   0.076   0.088   0.164     275
 S      3     0 0 2 1 0 0    1622     5313   0.305   0.264   0.569    3023
 W      1     0 0 0 1 0 0      13     1675   0.008   0.088   0.096     161
                                         LT = 0.078
TOTALS  6                    1773            0.473                    3616
                                       1 - 0.473 = 0.527 /  6 = 0.088
                                                             V/C = 0.490
                    EXISTING + APPROVED + PROJECT   LEVEL OF SERVICE =   A
=========================================================================
( 1773 - 1594 )/ 1594 =  11.23 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                        LEVEL OF SERVICE ANALYSIS
==========================================================================
LOCATION:       WINCHESTER & OLSEN
MESSAGE:        CUMULATIVE CONDITIONS  SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:      AM                     N-S      90.00    6.50
COUNT DATE:     4/17/97                E-W      22.00    3.00
ANAL. DATE:     7/2/97
ANAL. INIT:     RD                     CYCLE LENGTH =  121.5
GROWTH FACTOR % :    0.0               LOST TIME    =  0.078
------------------------------------------------------------------------
LEG  PATTERN      LANE            APPROVED     PROJECT          TOTAL
                 COUNTS            TRIPS        TRIPS            TRIPS
     LSTSRO     LT  THRU   RT    LT THRU  RT   LT THRU RT     LT  THRU   RT
 N   102100      5   494    9     0   26   0    5   6   0     10   526    9
 E   101010     18     0    8     0    0   0  110   0   3    128     0   11
 S   102100     64  1498   44     0   16   0    0  11  61     64  1525  105
 W   100100      6     0   13     0    0   0    0   0   0      6     0   13
========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./   ADJ.   C. CAP.
               L S T S R O                            LANE   G/C
========================================================================
 N      1     1 0 0 0 0 0      5     1675    0.003   0.102  0.105     176
 E      1     1 0 0 0 0 0     18     1675    0.011   0.102  0.113     189
 S      3     0 0 2 1 0 0   1542     5327    0.289   0.306  0.595    3170
 W      1     0 0 0 1 0 0     13     1675    0.008   0.102  0.110     184
                                        LT = 0.078
TOTALS  6                   1578             0.389                   3719
                                     1 - 0.389 = 0.611 /  6 = 0.102
                                                           V/C = 0.424
                                 EXISTING          LEVEL OF SERVICE =   A
------------------------------------------------------------------------
 N      1     1 0 0 0 0 0      5     1675    0.003   0.101  0.104     174
 E      1     1 0 0 0 0 0     18     1675    0.011   0.101  0.112     188
 S      3     0 0 2 1 0 0   1558     5327    0.292   0.304  0.596    3175
 W      1     0 0 0 1 0 0     13     1675    0.008   0.101  0.109     183
                                        LT = 0.078
TOTALS  6                   1594             0.392                   3720
                                     1 - 0.392 = 0.608 /  6 = 0.101
                                                           V/C = 0.428
                            EXISTING + APPROVED    LEVEL OF SERVICE =   A
------------------------------------------------------------------------
 N      1     1 0 0 0 0 0     10     1675    0.006   0.087  0.093     156
 E      1     1 0 0 0 0 0    128     1675    0.076   0.087  0.163     273
 S      3     0 0 2 1 0 0   1630     5313    0.307   0.262  0.569    3023
 W      1     0 0 0 1 0 0     13     1675    0.008   0.087  0.095     159
                                        LT = 0.078
TOTALS  6                   1781             0.475                   3611
                                     1 - 0.475 = 0.525 /  6 = 0.087
                                                           V/C = 0.493
                 EXISTING + APPROVED + PROJECT     LEVEL OF SERVICE =   A
========================================================================
( 1781 - 1594 )/ 1594 =  11.73 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

```
                                LEVEL OF SERVICE ANALYSIS
==========================================================================
LOCATION:       WINCHESTER & OLSEN
MESSAGE:        PROJECT CONDITIONS       SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:      PM                       N-S       90.00     6.50
COUNT DATE:     4/17/97                  E-W       22.00     3.00
ANAL. DATE:     7/2/97
ANAL. INIT:     RD                       CYCLE LENGTH =  121.5
GROWTH FACTOR % :      0.0               LOST TIME    =  0.078
-------------------------------------------------------------------------
LEG  PATTERN      LANE            APPROVED     PROJECT          TOTAL
                 COUNTS             TRIPS       TRIPS           TRIPS
     LSTSRO    LT  THRU   RT    LT THRU  RT   LT THRU RT     LT  THRU   RT
 N   102100    25  1441   39     0   16   0   16   12   0    41  1469   39
 E   101010    86     7   48     0    0   0  101    0  16   187     7   64
 S   102100    87   949  101     0   51   0    0   12 142    87  1012  243
 W   100100    33     3   23     0    0   0    0    0   0    33     3   23
=========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
              L S T S R O                            LANE     G/C
=========================================================================
 N      3     0 0 2 1 0 0   1480     5327    0.278   0.263   0.541    2882
 E      1     1 0 0 0 0 0     86     1675    0.051   0.088   0.139     233
 S      1     1 0 0 0 0 0     87     1675    0.052   0.088   0.140     235
 W      1     0 0 0 1 0 0     26     1687    0.015   0.088   0.103     174
                                         LT = 0.078
TOTALS  6                   1679             0.474                    3524
                                     1 - 0.474 = 0.526 /  6 = 0.088
                                                              V/C = 0.476
                                 EXISTING          LEVEL OF SERVICE =   A
-------------------------------------------------------------------------
 N      3     0 0 2 1 0 0   1496     5328    0.281   0.262   0.543    2893
 E      1     1 0 0 0 0 0     86     1675    0.051   0.087   0.138     231
 S      1     1 0 0 0 0 0     87     1675    0.052   0.087   0.139     233
 W      1     0 0 0 1 0 0     26     1687    0.015   0.087   0.102     172
                                         LT = 0.078
TOTALS  6                   1695             0.477                    3529
                                     1 - 0.477 = 0.523 /  6 = 0.087
                                                              V/C = 0.480
                            EXISTING + APPROVED    LEVEL OF SERVICE =   A
-------------------------------------------------------------------------
 N      3     0 0 2 1 0 0   1508     5328    0.283   0.230   0.513    2733
 E      1     1 0 0 0 0 0    187     1675    0.112   0.077   0.189     317
 S      1     1 0 0 0 0 0     87     1675    0.052   0.077   0.129     216
 W      1     0 0 0 1 0 0     26     1687    0.015   0.077   0.092     155
                                         LT = 0.078
TOTALS  6                   1808             0.540                    3421
                                     1 - 0.540 = 0.460 /  6 = 0.077
                                                              V/C = 0.529
                  EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   A
=========================================================================
( 1808 - 1695 )/ 1695 =   6.67 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                          LEVEL OF SERVICE ANALYSIS
==========================================================================
LOCATION:      WINCHESTER & OLSEN
MESSAGE:       CUMULATIVE CONDITIONS  SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:     PM                     N-S      90.00    6.50
COUNT DATE:    4/17/97                E-W      22.00    3.00
ANAL. DATE:    7/2/97
ANAL. INIT:    RD                     CYCLE LENGTH =  121.5
GROWTH FACTOR % :    0.0              LOST TIME    =  0.078
------------------------------------------------------------------------
LEG  PATTERN      LANE             APPROVED     PROJECT          TOTAL
                 COUNTS              TRIPS       TRIPS            TRIPS
     LSTSRO    LT   THRU   RT    LT THRU  RT    LT THRU RT     LT  THRU   RT
 N   102100    25   1441   39     0   16   0    16   38   0    41  1495   39
 E   101010    86      7   48     0    0   0   101    0  16   187     7   64
 S   102100    87    949  101     0   51   0     0   38 142    87  1038  243
 W   100100    33      3   23     0    0   0     0    0   0    33     3   23
========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./   ADJ.   C. CAP.
              L S T S R O                            LANE    G/C
========================================================================
 N      3     0 0 2 1 0 0    1480    5327   0.278   0.263   0.541   2882
 E      1     1 0 0 0 0 0      86    1675   0.051   0.088   0.139    233
 S      1     1 0 0 0 0 0      87    1675   0.052   0.088   0.140    235
 W      1     0 0 0 1 0 0      26    1687   0.015   0.088   0.103    174
                                       LT = 0.078
TOTALS  6                    1679           0.474                   3524
                                    1 - 0.474 = 0.526 /  6 = 0.088
                                                         V/C = 0.476
                             EXISTING            LEVEL OF SERVICE =   A
------------------------------------------------------------------------
 N      3     0 0 2 1 0 0    1496    5328   0.281   0.262   0.543   2893
 E      1     1 0 0 0 0 0      86    1675   0.051   0.087   0.138    231
 S      1     1 0 0 0 0 0      87    1675   0.052   0.087   0.139    233
 W      1     0 0 0 1 0 0      26    1687   0.015   0.087   0.102    172
                                       LT = 0.078
TOTALS  6                    1695           0.477                   3529
                                    1 - 0.477 = 0.523 /  6 = 0.087
                                                         V/C = 0.480
                          EXISTING + APPROVED    LEVEL OF SERVICE =   A
------------------------------------------------------------------------
 N      3     0 0 2 1 0 0    1534    5328   0.288   0.228   0.516   2749
 E      1     1 0 0 0 0 0     187    1675   0.112   0.076   0.188    315
 S      1     1 0 0 0 0 0      87    1675   0.052   0.076   0.128    214
 W      1     0 0 0 1 0 0      26    1687   0.015   0.076   0.091    154
                                       LT = 0.078
TOTALS  6                    1834           0.545                   3432
                                    1 - 0.545 = 0.455 /  6 = 0.076
                                                         V/C = 0.534
                EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   A
========================================================================
( 1834 - 1695 )/ 1695 =   8.20 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

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                         LEVEL OF SERVICE ANALYSIS
==========================================================================
LOCATION:      WINCHESTER & OLSEN
MESSAGE:       PROJECT CONDITIONS       SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:     SATURDAY PEAK            N-S      90.00    6.50
COUNT DATE:    10/4/97                  E-W      22.00    3.00
ANAL. DATE:    7/2/97
ANAL. INIT:    RD                       CYCLE LENGTH =  121.5
GROWTH FACTOR % :     0.0               LOST TIME    =  0.078
-------------------------------------------------------------------------
LEG  PATTERN      LANE            APPROVED     PROJECT          TOTAL
                 COUNTS             TRIPS        TRIPS           TRIPS
     LSTSRO    LT   THRU   RT    LT THRU  RT   LT THRU RT     LT  THRU   RT
 N   102100    78   1138  101     0   16   0   16  12   0     94  1166  101
 E   101010   151     14  108     0    0   0  102   0  16    253    14  124
 S   102100    98   1208  154     0   51   0    0  12 143     98  1271  297
 W   100100    76     23  236     0    0   0    0   0   0     76    23  236
=========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
              L S T S R O                            LANE     G/C
=========================================================================
 N      1     1 0 0 0 0 0      78     1675   0.047   0.062   0.109     183
 E      1     1 0 0 0 0 0     151     1675   0.090   0.062   0.152     255
 S      3     0 0 2 1 0 0    1362     5299   0.257   0.187   0.444    2353
 W      1     0 0 0 1 0 0     259     1684   0.154   0.062   0.216     364
                                          LT = 0.078
TOTALS  6                    1850            0.626                    3155
                                   1 - 0.626 = 0.374 /  6 = 0.062
                                                           V/C = 0.586
                                EXISTING          LEVEL OF SERVICE =   A
-------------------------------------------------------------------------
 N      1     1 0 0 0 0 0      78     1675   0.047   0.061   0.108     181
 E      1     1 0 0 0 0 0     151     1675   0.090   0.061   0.151     253
 S      3     0 0 2 1 0 0    1413     5300   0.267   0.182   0.449    2380
 W      1     0 0 0 1 0 0     259     1684   0.154   0.061   0.215     362
                                          LT = 0.078
TOTALS  6                    1901            0.636                    3176
                                   1 - 0.636 = 0.364 /  6 = 0.061
                                                           V/C = 0.599
                         EXISTING + APPROVED      LEVEL OF SERVICE =   A
-------------------------------------------------------------------------
 N      1     1 0 0 0 0 0      94     1675   0.056   0.044   0.100     168
 E      1     1 0 0 0 0 0     253     1675   0.151   0.044   0.195     327
 S      3     0 0 2 1 0 0    1568     5283   0.297   0.132   0.429    2266
 W      1     0 0 0 1 0 0     259     1684   0.154   0.044   0.198     333
                                          LT = 0.078
TOTALS  6                    2174            0.736                    3094
                                   1 - 0.736 = 0.264 /  6 = 0.044
                                                           V/C = 0.703
              EXISTING + APPROVED + PROJECT       LEVEL OF SERVICE =   C
=========================================================================
( 2174 - 1901 )/ 1901 =  14.36 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                              LEVEL OF SERVICE ANALYSIS
=========================================================================
LOCATION:      WINCHESTER & OLSEN
MESSAGE:       CUMULATIVE CONDITIONS  SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:     SATURDAY PEAK          N-S      90.00    6.50
COUNT DATE:    10/4/97                E-W      22.00    3.00
ANAL. DATE:    7/2/97
ANAL. INIT:    RD                     CYCLE LENGTH =  121.5
GROWTH FACTOR % :    0.0              LOST TIME    =  0.078
-----------------------------------------------------------------------
LEG  PATTERN      LANE           APPROVED     PROJECT         TOTAL
                 COUNTS            TRIPS        TRIPS          TRIPS
     LSTSRO    LT  THRU   RT    LT THRU  RT   LT THRU RT    LT  THRU   RT
 N   102100    78  1138  101     0   16   0   16   44   0    94  1198  101
 E   101010   151    14  108     0    0   0  102    0  16   253    14  124
 S   102100    98  1208  154     0   51   0    0   44 143    98  1303  297
 W   100100    76    23  236     0    0   0    0    0   0    76    23  236
=======================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./   ADJ.   C. CAP.
              L S T S R O                            LANE    G/C
=======================================================================
 N      1     1 0 0 0 0 0      78     1675   0.047   0.062   0.109    183
 E      1     1 0 0 0 0 0     151     1675   0.090   0.062   0.152    255
 S      3     0 0 2 1 0 0    1362     5299   0.257   0.187   0.444   2353
 W      1     0 0 0 1 0 0     259     1684   0.154   0.062   0.216    364
                                          LT = 0.078
TOTALS  6                    1850            0.626                   3155
                                     1 - 0.626 = 0.374 /  6 = 0.062
                                                            V/C = 0.586
                                  EXISTING          LEVEL OF SERVICE =   A
-----------------------------------------------------------------------
 N      1     1 0 0 0 0 0      78     1675   0.047   0.061   0.108    181
 E      1     1 0 0 0 0 0     151     1675   0.090   0.061   0.151    253
 S      3     0 0 2 1 0 0    1413     5300   0.267   0.182   0.449   2380
 W      1     0 0 0 1 0 0     259     1684   0.154   0.061   0.215    362
                                          LT = 0.078
TOTALS  6                    1901            0.636                   3176
                                     1 - 0.636 = 0.364 /  6 = 0.061
                                                            V/C = 0.599
                             EXISTING + APPROVED    LEVEL OF SERVICE =   A
-----------------------------------------------------------------------
 N      1     1 0 0 0 0 0      94     1675   0.056   0.043   0.099    166
 E      1     1 0 0 0 0 0     253     1675   0.151   0.043   0.194    325
 S      3     0 0 2 1 0 0    1600     5284   0.303   0.129   0.432   2283
 W      1     0 0 0 1 0 0     259     1684   0.154   0.043   0.197    332
                                          LT = 0.078
TOTALS  6                    2206            0.742                   3106
                                     1 - 0.742 = 0.258 /  6 = 0.043
                                                            V/C = 0.710
                EXISTING + APPROVED + PROJECT   LEVEL OF SERVICE =   C
=======================================================================
( 2206 - 1901 )/ 1901 =  16.04 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                          LEVEL OF SERVICE ANALYSIS
===========================================================================
LOCATION:      WINCHESTER & OLIN
MESSAGE:       PROJECT CONDITIONS       SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:     AM                       N-S      60.00     6.50
COUNT DATE:    4/17/97                  E-W      25.00     3.00
ANAL. DATE:    7/2/97
ANAL. INIT:    RD                       CYCLE LENGTH =  94.5
GROWTH FACTOR % :     0.0               LOST TIME    =  0.101
-------------------------------------------------------------------------
LEG  PATTERN      LANE           APPROVED      PROJECT           TOTAL
                 COUNTS            TRIPS         TRIPS            TRIPS
     LSTSRO    LT   THRU   RT    LT THRU  RT    LT THRU RT      LT  THRU   RT
 N   102100    43    513    8     0   26   0    45   5   0      88   544    8
 E   010010     4      1   12     0    0   0     2   0  70       6     1   82
 S   102100    11   1436   36     0   16   0     0   3   3      11  1455   39
 W   010010    12      0   17     0    0   0     0   0   0      12     0   17
=========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.    G/C    ADJ./    ADJ.   C. CAP.
              L S T S R O                             LANE     G/C
=========================================================================
 N      1     1 0 0 0 0 0      43     1675    0.026   0.098   0.124     208
 E      1     0 1 0 0 0 0       5     1696    0.003   0.098   0.101     171
 S      3     0 0 2 1 0 0    1472     5328    0.276   0.294   0.570    3037
 W      1     0 1 0 0 0 0      12     1675    0.007   0.098   0.105     176
                                          LT = 0.101
TOTALS  6                    1532                0.413                   3592
                                      1 - 0.413 = 0.587 /  6 = 0.098
                                                               V/C = 0.427
                                    EXISTING         LEVEL OF SERVICE =   A
-------------------------------------------------------------------------
 N      1     1 0 0 0 0 0      43     1675    0.026   0.097   0.123     206
 E      1     0 1 0 0 0 0       5     1696    0.003   0.097   0.100     170
 S      3     0 0 2 1 0 0    1488     5328    0.279   0.292   0.571    3042
 W      1     0 1 0 0 0 0      12     1675    0.007   0.097   0.104     174
                                          LT = 0.101
TOTALS  6                    1548                0.416                   3592
                                      1 - 0.416 = 0.584 /  6 = 0.097
                                                               V/C = 0.431
                               EXISTING + APPROVED    LEVEL OF SERVICE =   A
-------------------------------------------------------------------------
 N      1     1 0 0 0 0 0      88     1675    0.053   0.093   0.146     245
 E      1     0 1 0 0 0 0       7     1690    0.004   0.093   0.097     164
 S      3     0 0 2 1 0 0    1494     5328    0.280   0.278   0.558    2973
 W      1     0 1 0 0 0 0      12     1675    0.007   0.093   0.100     168
                                          LT = 0.101
TOTALS  6                    1601                0.445                   3550
                                      1 - 0.445 = 0.555 /  6 = 0.093
                                                               V/C = 0.451
                     EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   A
=========================================================================
( 1601 - 1548 )/ 1548 =   3.42 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

```
                         LEVEL OF SERVICE ANALYSIS
===========================================================================
LOCATION:      WINCHESTER & OLIN
MESSAGE:       CUMULATIVE CONDTIONS   SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:     AM                     N-S      60.00    6.50
COUNT DATE:    4/17/97                E-W      25.00    3.00
ANAL. DATE:    7/2/97
ANAL. INIT:    RD                     CYCLE LENGTH =  94.5
GROWTH FACTOR % :    0.0              LOST TIME    =  0.101
-------------------------------------------------------------------------
LEG  PATTERN     LANE            APPROVED     PROJECT          TOTAL
                COUNTS             TRIPS       TRIPS           TRIPS
     LSTSRO    LT  THRU   RT    LT THRU  RT    LT THRU RT     LT  THRU   RT
 N   102100    43   513    8     0   26   0    45   9   0     88   548    8
 E   010010     4     1   12     0    0   0     2   0  70      6     1   82
 S   102100    11  1436   36     0   16   0     0  11   3     11  1463   39
 W   010010    12     0   17     0    0   0     0   0   0     12     0   17
=========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
               L S T S R O                           LANE     G/C
=========================================================================
 N      1     1 0 0 0 0 0      43     1675   0.026   0.098   0.124    208
 E      1     0 1 0 0 0 0       5     1696   0.003   0.098   0.101    171
 S      3     0 0 2 1 0 0    1472     5328   0.276   0.294   0.570   3037
 W      1     0 1 0 0 0 0      12     1675   0.007   0.098   0.105    176
                                         LT = 0.101
TOTALS  6                    1532            0.413                   3592
                                    1 - 0.413 = 0.587 /  6 = 0.098
                                                         V/C = 0.427
                               EXISTING          LEVEL OF SERVICE =   A
-------------------------------------------------------------------------
 N      1     1 0 0 0 0 0      43     1675   0.026   0.097   0.123    206
 E      1     0 1 0 0 0 0       5     1696   0.003   0.097   0.100    170
 S      3     0 0 2 1 0 0    1488     5328   0.279   0.292   0.571   3042
 W      1     0 1 0 0 0 0      12     1675   0.007   0.097   0.104    174
                                         LT = 0.101
TOTALS  6                    1548            0.416                   3592
                                    1 - 0.416 = 0.584 /  6 = 0.097
                                                         V/C = 0.431
                          EXISTING + APPROVED    LEVEL OF SERVICE =   A
-------------------------------------------------------------------------
 N      1     1 0 0 0 0 0      88     1675   0.053   0.092   0.145    243
 E      1     0 1 0 0 0 0       7     1690   0.004   0.092   0.096    162
 S      3     0 0 2 1 0 0    1502     5328   0.282   0.276   0.558   2973
 W      1     0 1 0 0 0 0      12     1675   0.007   0.092   0.099    166
                                         LT = 0.101
TOTALS  6                    1609            0.447                   3544
                                    1 - 0.447 = 0.553 /  6 = 0.092
                                                         V/C = 0.454
                 EXISTING + APPROVED + PROJECT   LEVEL OF SERVICE =   A
=========================================================================
( 1609 - 1548 )/ 1548 =   3.94 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

```
                         LEVEL OF SERVICE ANALYSIS
==========================================================================
LOCATION:       WINCHESTER & OLIN
MESSAGE:        PROJECT CONDITIONS      SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:      PM                      N-S      60.00    6.50
COUNT DATE:     4/17/97                 E-W      25.00    3.00
ANAL. DATE:     7/2/97
ANAL. INIT:     RD                      CYCLE LENGTH =  94.5
GROWTH FACTOR % :     0.0               LOST TIME    =  0.101
-------------------------------------------------------------------------
LEG  PATTERN      LANE           APPROVED      PROJECT           TOTAL
                 COUNTS            TRIPS         TRIPS             TRIPS
     LSTSRO    LT  THRU   RT    LT THRU  RT    LT THRU RT     LT  THRU   RT
 N   102100   114  1410   40     0   16   0   110  16   0    224  1442   40
 E   010010    56     1   25     0    0   0    12   0  86     68     1  111
 S   102100    22   925   51     0   51   0     0  16  12     22   992   63
 W   010010    22     3   29     0    0   0     0   0   0     22     3   29
=========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./   ADJ.   C. CAP.
              L S T S R O                            LANE    G/C
=========================================================================
 N      3     0 0 2 1 0 0    1450     5327   0.272   0.282   0.554    2951
 E      1     0 1 0 0 0 0      57     1677   0.034   0.094   0.128     215
 S      1     1 0 0 0 0 0      22     1675   0.013   0.094   0.107     179
 W      1     0 1 0 0 0 0      25     1688   0.015   0.094   0.109     184
                                         LT = 0.101
TOTALS  6                    1554            0.435                    3529
                                      1 - 0.435 = 0.565 /  6 = 0.094
                                                              V/C = 0.440
                                  EXISTING          LEVEL OF SERVICE =   A
-------------------------------------------------------------------------
 N      3     0 0 2 1 0 0    1466     5327   0.275   0.281   0.556    2962
 E      1     0 1 0 0 0 0      57     1677   0.034   0.094   0.128     215
 S      1     1 0 0 0 0 0      22     1675   0.013   0.094   0.107     179
 W      1     0 1 0 0 0 0      25     1688   0.015   0.094   0.109     184
                                         LT = 0.101
TOTALS  6                    1570            0.438                    3540
                                      1 - 0.438 = 0.562 /  6 = 0.094
                                                              V/C = 0.444
                              EXISTING + APPROVED    LEVEL OF SERVICE =   A
-------------------------------------------------------------------------
 N      1     1 0 0 0 0 0     224     1675   0.134   0.085   0.219     367
 E      1     0 1 0 0 0 0      69     1677   0.041   0.085   0.126     211
 S      3     0 0 2 1 0 0    1055     5315   0.198   0.255   0.453    2408
 W      1     0 1 0 0 0 0      25     1688   0.015   0.085   0.100     169
                                         LT = 0.101
TOTALS  6                    1373            0.489                    3155
                                      1 - 0.489 = 0.511 /  6 = 0.085
                                                              V/C = 0.435
                    EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   A
=========================================================================
( 1373 - 1570 )/ 1570 = -12.55 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                         LEVEL OF SERVICE ANALYSIS
===========================================================================
LOCATION:       WINCHESTER & OLIN
MESSAGE:        CUMULATIVE CONDITIONS  SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:      PM                     N-S      60.00     6.50
COUNT DATE:     4/17/97                E-W      25.00     3.00
ANAL. DATE:     7/2/97
ANAL. INIT:     RD                     CYCLE LENGTH =  94.5
GROWTH FACTOR % :    0.0               LOST TIME    =  0.101
-------------------------------------------------------------------------
LEG  PATTERN      LANE            APPROVED     PROJECT          TOTAL
                 COUNTS            TRIPS        TRIPS           TRIPS
     LSTSRO    LT  THRU   RT     LT THRU  RT   LT THRU RT     LT  THRU   RT
 N   102100   114  1410   40      0   16   0  110   42   0   224  1468   40
 E   010010    56     1   25      0    0   0   12    0  86    68     1  111
 S   102100    22   925   51      0   51   0    0   42  12    22  1018   63
 W   010010    22     3   29      0    0   0    0    0   0    22     3   29
=========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./   ADJ.   C. CAP.
              L S T S R O                            LANE    G/C
=========================================================================
 N      3     0 0 2 1 0 0    1450     5327    0.272  0.282   0.554   2951
 E      1     0 1 0 0 0 0      57     1677    0.034  0.094   0.128    215
 S      1     1 0 0 0 0 0      22     1675    0.013  0.094   0.107    179
 W      1     0 1 0 0 0 0      25     1688    0.015  0.094   0.109    184
                                          LT = 0.101
TOTALS  6                    1554                 0.435                  3529
                                      1 - 0.435 = 0.565 /  6 = 0.094
                                                              V/C = 0.440
                               EXISTING           LEVEL OF SERVICE =   A
-------------------------------------------------------------------------
 N      3     0 0 2 1 0 0    1466     5327    0.275  0.281   0.556   2962
 E      1     0 1 0 0 0 0      57     1677    0.034  0.094   0.128    215
 S      1     1 0 0 0 0 0      22     1675    0.013  0.094   0.107    179
 W      1     0 1 0 0 0 0      25     1688    0.015  0.094   0.109    184
                                          LT = 0.101
TOTALS  6                    1570                 0.438                  3540
                                      1 - 0.438 = 0.562 /  6 = 0.094
                                                              V/C = 0.444
                           EXISTING + APPROVED    LEVEL OF SERVICE =   A
-------------------------------------------------------------------------
 N      1     1 0 0 0 0 0     224     1675    0.134  0.084   0.218    365
 E      1     0 1 0 0 0 0      69     1677    0.041  0.084   0.125    210
 S      3     0 0 2 1 0 0    1081     5315    0.203  0.253   0.456   2424
 W      1     0 1 0 0 0 0      25     1688    0.015  0.084   0.099    167
                                          LT = 0.101
TOTALS  6                    1399                 0.494                  3166
                                      1 - 0.494 = 0.506 /  6 = 0.084
                                                              V/C = 0.442
                    EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   A
=========================================================================
( 1399 - 1570 )/ 1570 = -10.89 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

```
                         LEVEL OF SERVICE ANALYSIS
==========================================================================
LOCATION:      WINCHESTER & OLIN
MESSAGE:       PROJECT CONDITIONS     SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:     SATURDAY PEAK          N-S      60.00     6.50
COUNT DATE:    9/27/97                E-W      25.00     3.00
ANAL. DATE:    7/2/97
ANAL. INIT:    RD                     CYCLE LENGTH =  94.5
GROWTH FACTOR % :    0.0              LOST TIME    =  0.101
-------------------------------------------------------------------------
LEG  PATTERN      LANE            APPROVED      PROJECT          TOTAL
                 COUNTS             TRIPS        TRIPS            TRIPS
     LSTSRO    LT   THRU   RT    LT THRU  RT   LT THRU RT     LT  THRU   RT
 N   102100   177   1051   37     0   16   0   111  16   0    288  1083   37
 E   010010   116      9   88     0    0   0    12   0  87    128     9  175
 S   102100    30   1221   77     0   51   0     0  16  12     30  1288   89
 W   010010    46      9   43     0    0   0     0   0   0     46     9   43
=========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
              L S T S R O                             LANE     G/C
=========================================================================
 N      1     1 0 0 0 0 0    177     1675    0.106   0.074   0.180     302
 E      1     0 1 0 0 0 0    125     1683    0.074   0.074   0.148     249
 S      3     0 0 2 1 0 0   1298     5315    0.244   0.221   0.465    2471
 W      1     0 1 0 0 0 0     55     1692    0.033   0.074   0.107     181
                                        LT = 0.101
TOTALS  6                   1655             0.558                    3203
                                    1 - 0.558 = 0.442 /  6 = 0.074
                                                           V/C = 0.517
                                 EXISTING         LEVEL OF SERVICE =   A
-------------------------------------------------------------------------
 N      1     1 0 0 0 0 0    177     1675    0.106   0.072   0.178     298
 E      1     0 1 0 0 0 0    125     1683    0.074   0.072   0.146     246
 S      3     0 0 2 1 0 0   1349     5316    0.254   0.216   0.470    2499
 W      1     0 1 0 0 0 0     55     1692    0.033   0.072   0.105     178
                                        LT = 0.101
TOTALS  6                   1706             0.568                    3221
                                    1 - 0.568 = 0.432 /  6 = 0.072
                                                           V/C = 0.530
                            EXISTING + APPROVED    LEVEL OF SERVICE =   A
-------------------------------------------------------------------------
 N      1     1 0 0 0 0 0    288     1675    0.172   0.059   0.231     387
 E      1     0 1 0 0 0 0    137     1682    0.081   0.059   0.140     235
 S      3     0 0 2 1 0 0   1377     5313    0.259   0.177   0.436    2316
 W      1     0 1 0 0 0 0     55     1692    0.033   0.059   0.092     156
                                        LT = 0.101
TOTALS  6                   1857             0.646                    3094
                                    1 - 0.646 = 0.354 /  6 = 0.059
                                                           V/C = 0.600
                  EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   B
=========================================================================
( 1857 - 1706 )/ 1706 =   8.85 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                         LEVEL OF SERVICE ANALYSIS
==========================================================================
LOCATION:         WINCHESTER & OLIN
MESSAGE:          CUMULATIVE CONDITIONS  SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:        SATURDAY PEAK          N-S      60.00    6.50
COUNT DATE:       9/27/97                E-W      25.00    3.00
ANAL. DATE:       7/2/97
ANAL. INIT:       RD                     CYCLE LENGTH =  94.5
GROWTH FACTOR % :     0.0                LOST TIME    =  0.101
------------------------------------------------------------------------
LEG  PATTERN      LANE            APPROVED      PROJECT         TOTAL
                 COUNTS             TRIPS        TRIPS          TRIPS
     LSTSRO     LT  THRU   RT    LT THRU  RT    LT THRU RT     LT  THRU   RT
 N   102100    177  1051   37     0   16   0   111  48   0    288  1115   37
 E   010010    116     9   88     0    0   0    12   0  87    128     9  175
 S   102100     30  1221   77     0   51   0     0  48  12     30  1320   89
 W   010010     46     9   43     0    0   0     0   0   0     46     9   43
========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
              L S T S R O                             LANE     G/C
========================================================================
 N      1     1 0 0 0 0 0     177     1675   0.106   0.074   0.180     302
 E      1     0 1 0 0 0 0     125     1683   0.074   0.074   0.148     249
 S      3     0 0 2 1 0 0    1298     5315   0.244   0.221   0.465    2471
 W      1     0 1 0 0 0 0      55     1692   0.033   0.074   0.107     181
                                          LT = 0.101
TOTALS  6                    1655                0.558                  3203
                                     1 - 0.558 = 0.442 /  6 = 0.074
                                                               V/C = 0.517
                             EXISTING           LEVEL OF SERVICE =   A
------------------------------------------------------------------------
 N      1     1 0 0 0 0 0     177     1675   0.106   0.072   0.178     298
 E      1     0 1 0 0 0 0     125     1683   0.074   0.072   0.146     246
 S      3     0 0 2 1 0 0    1349     5316   0.254   0.216   0.470    2499
 W      1     0 1 0 0 0 0      55     1692   0.033   0.072   0.105     178
                                          LT = 0.101
TOTALS  6                    1706                0.568                  3221
                                     1 - 0.568 = 0.432 /  6 = 0.072
                                                               V/C = 0.530
                         EXISTING + APPROVED    LEVEL OF SERVICE =   A
------------------------------------------------------------------------
 N      1     1 0 0 0 0 0     288     1675   0.172   0.058   0.230     385
 E      1     0 1 0 0 0 0     137     1682   0.081   0.058   0.139     234
 S      3     0 0 2 1 0 0    1409     5314   0.265   0.174   0.439    2333
 W      1     0 1 0 0 0 0      55     1692   0.033   0.058   0.091     154
                                          LT = 0.101
TOTALS  6                    1889                0.652                  3106
                                     1 - 0.652 = 0.348 /  6 = 0.058
                                                               V/C = 0.608
                   EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   B
========================================================================
( 1889 - 1706 )/ 1706 =  10.73 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

Appendix E

Level of Service Calculations
CMP Method

```
                          C A P S S I                                      -97
                 COMPREHENSIVE ANALYSIS PROGRAM
              FOR A SINGLE SIGNALIZED INTERSECTION *


                      EXISTING CONDITIONS
             SOLUTION USING PREDETERMINED CYCLE TIMES
                                                              FLN:280moo
I280/MOORPARK                  -          A.M Peak Hour       Scenario  1
__________________________________________________________________________
                   |                   |                |                 |
    Movement      EBT  EBL  EBR  SBT  SBL  SBR  WBT  WBL  WBR  NBT  NBL  NBR
Phase 1 -  67 secs  X    .    .    .    .    .    X    .    .    .    .    .
Phase 2 -  67 secs  .    .    .    .    X    X    .    .    .    .    .    .
Phase 3 -   0 secs  .    .    .    .    .    .    .    .    .    .    .    .
Phase 4 -   0 secs  .    .    .    .    .    .    .    .    .    .    .    .
Phase 5 -   0 secs  .    .    .    .    .    .    .    .    .    .    .    .
Phase 6 -   0 secs  .    .    .    .    .    .    .    .    .    .    .    .
___________________|___________________|________________|_________________
                   |                   |                |
  Critical Mvmt-** ****                ****
  Peak 15 Vol -vph  507                 756   13   467
  Saturation  -vph 3300                5100  Shrd  3800
  Lost time   -sec 2.00                2.00   -    2.00
  Relative Sat 'X' 0.28                0.31   -    0.25
  Effective Gr-sec   65                  65   -      65
  Move Time   -sec   67                  67   -      67
  Min/Ped Time-sec   20                  10   -      20
  Prog Factor  PAF 1.00                1.00   -    1.00
  AvDelay/veh -sec   16                  16   -      15
  Level of Service   C+                  C+   -      C+
  Av.'Q'/ lane veh    5                   5   -       4
  Veh Stopping  %    59                  61   -      59
  Do Veh Clear  ?   YES                 YES   -     YES
___________________|___________________|________________|_________________

      Whole Intersection - Weighted Av Delay (sec) =  16  Level of Service =  C+
      Critical Movements - Weighted Av Delay (sec) =  16  Level of Service =  C+
        ''        ''     - Intersection Capacity Utilization (ICU) =  0.29

      Predetermined Cycle Length is 134 seconds (All Minimum times are satisfied)

* CAPSSI (Release 11) - Based on Delay Methodology Per 1985 Highway Capacity Manual
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```
                    C A P S S I                                  10-16-97
            COMPREHENSIVE ANALYSIS PROGRAM
          FOR A SINGLE SIGNALIZED INTERSECTION *


                 BACKGROUND CONDITIONS
          SOLUTION USING PREDETERMINED CYCLE TIMES
                                                                 FLN:280moo
 I280/MOORPARK                                  A.M Peak Hour    Scenario  2
 ____________________________________________________________________________
                     |                     |                     |
   Movement          EBT   EBL   EBR   SBT   SBL   SBR   WBT   WBL   WBR   NBT   NBL   NBR
 Phase 1 -  67 secs   X     .     .     .     .     .     X     .     .     .     .     .
 Phase 2 -  67 secs   .     .     .     .     X     X     .     .     .     .     .     .
 Phase 3 -   0 secs   .     .     .     .     .     .     .     .     .     .     .     .
 Phase 4 -   0 secs   .     .     .     .     .     .     .     .     .     .     .     .
 Phase 5 -   0 secs   .     .     .     .     .     .     .     .     .     .     .     .
 Phase 6 -   0 secs   .     .     .     .     .     .     .     .     .     .     .     .
 ____________________|_____________________|_____________________|_______________________
                     |                     |                     |
  Critical Mvmt-**  ****                  ****
  Peak 15 Vol -vph   511                   772   [illegible]  475
  Saturation  -vph  3800                  5100  Shrd  3800
  Lost time   -sec  2.00                  2.00   -    2.00
  Relative Sat 'X'  0.28                  0.32   -    0.26
  Effective Gr-sec    65                    65   -      65
  Move Time   -sec    67                    67   -      67
  Min/Ped Time-sec    20                    10   -      20
  Prog Factor  PAF  1.00                  1.00   -    1.00
  AvDelay/veh -sec    16                    16   -      15
  Level of Service    C+                    C+   -      C+
  Av.'Q'/ lane veh     5                     5   -       5
  Veh Stopping  %     59                    61   -      59
  Do Veh Clear  ?    YES                   YES   -     YES
 ___________________|_____________________|_____________________|_____________________

       Whole Intersection - Weighted Av Delay (sec) =  16  Level of Service =  C+
       Critical Movements - Weighted Av Delay (sec) =  16  Level of Service =  C+
          ''        ''    - Intersection Capacity Utilization (ICU) =  0.30

      Predetermined Cycle Length is 134 seconds (All Minimum times are satisfied)

 * CAPSSI (Release 11) - Based on Delay Methodology Per 1985 Highway Capacity Manual
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97-036

```
                         C A P S S I                          [illegible]-16-97
              COMPREHENSIVE ANALYSIS PROGRAM
            FOR A SINGLE SIGNALIZED INTERSECTION *


                      PROJECT CONDITIONS
             SOLUTION USING PREDETERMINED CYCLE TIMES
                                                                  FLN:280moo
 I280/MOORPARK                                      A.M Peak Hour     Scenario  3
_________________________________________________________________________________
                     |                  |                  |                 |
   Movement           EBT   EBL   EBR   SBT   SBL   SBR   WBT   WBL   WBR   NBT   NBL   NBR
 Phase 1 -  65 secs    X     .     .     .     .     .     X     .     .     .     .     .
 Phase 2 -  69 secs    .     .     .     .     X     X     .     .     .     .     .     .
 Phase 3 -   0 secs    .     .     .     .     .     .     .     .     .     .     .     .
 Phase 4 -   0 secs    .     .     .     .     .     .     .     .     .     .     .     .
 Phase 5 -   0 secs    .     .     .     .     .     .     .     .     .     .     .     .
 Phase 6 -   0 secs    .     .     .     .     .     .     .     .     .     .     .     .
_____________________|__________________|__________________|_________________|______________
                     |                  |                  |                 |
  Critical Mvmt-**    ****                    ****
  Peak 15 Vol -vph    514                      827    13   476
  Saturation  -vph   3800                     5100  Shrd  3800
  Lost time   -sec   2.00                     2.00    -   2.00
  Relative Sat 'X'   0.29                     0.33    -   0.27
  Effective Gr-sec     63                       67    -     63
  Move Time   -sec     65                       69    -     65
  Min/Ped Time-sec     20                       10    -     20
  Prog Factor  PAF   1.00                     1.00    -   1.00
  AvDelay/veh -sec     17                       15    -     16
  Level of Service     C+                       C+    -     C+
  Av.'Q'/ lane veh      5                        5    -      5
  Veh Stopping  %      61                       60    -     61
  Do Veh Clear  ?     YES                      YES    -    YES
_____________________|__________________|__________________|_________________|______________

     Whole Intersection - Weighted Av Delay (sec) =  16  Level of Service =  C+
     Critical Movements - Weighted Av Delay (sec) =  16  Level of Service =  C+
        ''        ''    - Intersection Capacity Utilization (ICU) =  0.31

    Predetermined Cycle Length is 134 seconds (All Minimum times are satisfied)

 * CAPSSI (Release 11) - Based on Delay Methodology Per 1985 Highway Capacity Manual
```

```
                          C A P S S I                                [illegible]-10-97
                 COMPREHENSIVE ANALYSIS PROGRAM
              FOR A SINGLE SIGNALIZED INTERSECTION *


                      CUMULATIVE W/PROJECT
              SOLUTION USING PREDETERMINED CYCLE TIMES
                                                                     FLN:280MOO
 I280/MOORPARK                                    A.M Peak Hour      Scenario  5
 ________________________________________________________________________________
                      |                    |                  |                |
   Movement            EBT   EBL   EBR   SBT   SBL   SBR   WBT   WBL   WBR   NBT   NBL   NBR
 Phase 1 -  64 secs     X     .     .     .     .     .     X     .     .     .     .     .
 Phase 2 -  70 secs     .     .     .     .     X     X     .     .     .     .     .     .
 Phase 3 -   0 secs     .     .     .     .     .     .     .     .     .     .     .     .
 Phase 4 -   0 secs     .     .     .     .     .     .     .     .     .     .     .     .
 Phase 5 -   0 secs     .     .     .     .     .     .     .     .     .     .     .     .
 Phase 6 -   0 secs     .     .     .     .     .     .     .     .     .     .     .     .
 _____________________|____________________|__________________|________________
                      |                    |                  |                |
  Critical Mvmt-**     ****                     ****
  Peak 15 Vol -vph     514                      832   13    476
  Saturation  -vph    3800                     5100  Shrd  3800
  Lost time   -sec    2.00                     2.00   -    2.00
  Relative Sat 'X'    0.29                     0.33   -    0.27
  Effective Gr-sec      62                       68   -      62
  Move Time   -sec      64                       70   -      64
  Min/Ped Time-sec      20                       10   -      20
  Prog Factor  PAF    1.00                     1.00   -    1.00
  AvDelay/veh -sec      17                       15   -      17
  Level of Service      C+                       B-   -      C+
  Av.'Q'/ lane veh       5                        5   -       5
  Veh Stopping  %       62                       59   -      61
  Do Veh Clear  ?      YES                      YES   -     YES
 _____________________|____________________|__________________|________________

       Whole Intersection - Weighted Av Delay (sec) =  16  Level of Service =  C+
       Critical Movements - Weighted Av Delay (sec) =  16  Level of Service =  C+
          ''        ''    - Intersection Capacity Utilization (ICU) =  0.31

      Predetermined Cycle Length is 134 seconds (All Minimum times are satisfied)

 * CAPSSI (Release 11) - Based on Delay Methodology Per 1985 Highway Capacity Manual
```

```
                              C A P S S I                              [illegible]-26-97
                   COMPREHENSIVE ANALYSIS PROGRAM
                 FOR A SINGLE SIGNALIZED INTERSECTION *


                        EXISTING CONDITIONS
                 SOLUTION USING PREDETERMINED CYCLE TIMES
                                                                      FLN:280moo
I280/MOORPARK                                        P.M Peak Hour    Scenario  6
_______________________________________________________________________________
                   |                  |                 |
 Movement            EBT   EBL   EBR   SBT   SBL   SBR   WBT   WBL   WBR   NBT   NBL   NBR
Phase 1 -  65 secs    X     .     .     .     .     .     X     .     .     .     .     .
Phase 2 -  69 secs    .     .     .     .     X     X     .     .     .     .     .     .
Phase 3 -   0 secs    .     .     .     .     .     .     .     .     .     .     .     .
Phase 4 -   0 secs    .     .     .     .     .     .     .     .     .     .     .     .
Phase 5 -   0 secs    .     .     .     .     .     .     .     .     .     .     .     .
Phase 6 -   0 secs    .     .     .     .     .     .     .     .     .     .     .     .
__________________|__________________|_________________|__________________|______________
                  |                  |                 |                  |
 Critical Mvmt-**                         ****          ****
 Peak 15 Vol -vph  536                    883    125    665
 Saturation  -vph 3800                   5100   Shrd   3800
 Lost time   -sec 2.00                   2.00    -     2.00
 Relative Sat 'X' 0.30                   0.42    -     0.37
 Effective Gr-sec   63                     67    -       63
 Move Time   -sec   65                     69    -       65
 Min/Ped Time-sec   20                     10    -       20
 Prog Factor  PAF 1.00                   1.00    -     1.00
 AvDelay/veh -sec   17                     16    -       17
 Level of Service   C+                     C+    -       C+
 Av.'Q'/ lane veh    5                      7    -        7
 Veh Stopping  %    62                     63    -       64
 Do Veh Clear  ?   YES                    YES    -      YES
__________________|__________________|_________________|__________________|______________

        Whole Intersection - Weighted Av Delay (sec) =  17  Level of Service =  C+
        Critical Movements - Weighted Av Delay (sec) =  17  Level of Service =  C+
            ''        ''     - Intersection Capacity Utilization (ICU) =  0.40

      Predetermined Cycle Length is 134 seconds (All Minimum times are satisfied)

 * CAPSSI (Release 11) - Based on Delay Methodology Per 1985 Highway Capacity Manual
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                              C A P S S I                                 11-10-97
                      COMPREHENSIVE ANALYSIS PROGRAM
                   FOR A SINGLE SIGNALIZED INTERSECTION *

                           CUMULATIVE W/PROJECT
                  SOLUTION USING PREDETERMINED CYCLE TIMES
                                                                     FLN:280MOO
 I280/MOORPARK                                    P.M Peak Hour      Scenario 10
 ______________________________________________________________________________
                    |                   |                   |                   |
   Movement        EBT   EBL   EBR   SBT   SBL   SBR   WBT   WBL   WBR   NBT   NBL   NBR
 Phase 1 -  61 secs  X     .     .     .     .     .     X     .     .     .     .     .
 Phase 2 -  73 secs  .     .     .     .     X     X     .     .     .     .     .     .
 Phase 3 -   0 secs  .     .     .     .     .     .     .     .     .     .     .     .
 Phase 4 -   0 secs  .     .     .     .     .     .     .     .     .     .     .     .
 Phase 5 -   0 secs  .     .     .     .     .     .     .     .     .     .     .     .
 Phase 6 -   0 secs  .     .     .     .     .     .     .     .     .     .     .     .
 __________________|_________________|_________________|_________________|__________
                   |                 |                 |                 |
  Critical Mvmt-**                        ****          ****
  Peak 15 Vol -vph  569                   1063   191    698
  Saturation  -vph 3800                   5100   Shrd  3800
  Lost time   -sec 2.00                   2.00    -    2.00
  Relative Sat 'X' 0.34                   0.46    -    0.42
  Effective Gr-sec   59                     71    -      59
  Move Time   -sec   61                     73    -      61
  Min/Ped Time-sec   20                     10    -      20
  Prog Factor  PAF 1.00                   1.00    -    1.00
  AvDelay/veh -sec   19                     15    -      20
  Level of Service   C+                     C+    -      C+
  Av.'Q'/ lane veh    6                      7    -       7
  Veh Stopping  %    66                     62    -      69
  Do Veh Clear  ?   YES                    YES    -     YES
 __________________|_________________|_________________|_________________|__________

      Whole Intersection - Weighted Av Delay (sec) =  17  Level of Service =  C+
      Critical Movements - Weighted Av Delay (sec) =  17  Level of Service =  C+
         ''        ''    - Intersection Capacity Utilization (ICU) =  0.44

     Predetermined Cycle Length is 134 seconds (All Minimum times are satisfied)

 * CAPSSI (Release 11) - Based on Delay Methodology Per 1985 Highway Capacity Manual
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                     C A P S S I                                  11-16-97
           COMPREHENSIVE ANALYSIS PROGRAM
        FOR A SINGLE SIGNALIZED INTERSECTION *


                   EXISTING CONDITIONS
          SOLUTION USING PREDETERMINED CYCLE TIMES
                                                              FLN:880ste
880/STEVENS CREEK                             A.M Peak Hour   Scenario  1
_________________________________________________________________________
                   |                   |              |                 |
   Movement         EBT  EBL  EBR  SBT  SBL  SBR  WBT  WBL  WBR  NBT  NBL  NBR
Phase 1 -  79 secs   .    .    .    .    .    .    X    .    .    .    .    .
Phase 2 -  55 secs   .    .    .    .    .    X    .    .    .    .    .    .
Phase 3 -   0 secs   .    .    .    .    .    .    .    .    .    .    .    .
Phase 4 -   0 secs   .    .    .    .    .    .    .    .    .    .    .    .
Phase 5 -   0 secs   .    .    .    .    .    .    .    .    .    .    .    .
Phase 6 -   0 secs   .    .    .    .    .    .    .    .    .    .    .    .
___________________|_______________|______________|_______________|________
                   |               |              |               |
 Critical Mvmt-**                          ****  ****
 Peak 15 Vol -vph                           426  1034
 Saturation  -vph                          3150  5700
 Lost time   -sec                          2.00  2.00
 Relative Sat 'X'                          0.34  0.32
 Effective Gr-sec                            53    77
 Move Time   -sec                            55    79
 Min/Ped Time-sec                             5    14
 Prog Factor  PAF                          1.00  1.00
 AvDelay/veh -sec                            22    11
 Level of Service                            C-    B-
 Av.'Q'/ lane veh                             5     5
 Veh Stopping  %                             70    52
 Do Veh Clear  ?                            YES   YES
___________________|_______________|______________|_______________|________

     Whole Intersection - Weighted Av Delay (sec) =  14  Level of Service =  B-
     Critical Movements - Weighted Av Delay (sec) =  14  Level of Service =  B-
       ''        ''     - Intersection Capacity Utilization (ICU) =  0.33

    Predetermined Cycle Length is 134 seconds (All Minimum times are satisfied)

 * CAPSSI (Release 11) - Based on Delay Methodology Per 1985 Highway Capacity Manual
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                           C A P S S I                                10-16-97
                  COMPREHENSIVE ANALYSIS PROGRAM
               FOR A SINGLE SIGNALIZED INTERSECTION *


                       BACKGROUND CONDITIONS
                SOLUTION USING PREDETERMINED CYCLE TIMES
                                                                    FLN:280moo
I280/MOORPARK                                   P.M Peak Hour       Scenario  7
_______________________________________________________________________________
                   |                   |                   |                 |
   Movement        EBT  EBL  EBR  SBT  SBL  SBR  WBT  WBL  WBR  NBT  NBL  NBR
 Phase 1 -  64 secs  X    .    .    .    .    .    X    .    .    .    .    .
 Phase 2 -  70 secs  .    .    .    .    X    X    .    .    .    .    .    .
 Phase 3 -   0 secs  .    .    .    .    .    .    .    .    .    .    .    .
 Phase 4 -   0 secs  .    .    .    .    .    .    .    .    .    .    .    .
 Phase 5 -   0 secs  .    .    .    .    .    .    .    .    .    .    .    .
 Phase 6 -   0 secs  .    .    .    .    .    .    .    .    .    .    .    .
___________________|___________________|___________________|_________________
                   |                   |                   |
  Critical Mvmt-**                       ****           ****
  Peak 15 Vol -vph  560                   921    191     689
  Saturation  -vph 3800                  5100   Shrd    3800
  Lost time   -sec 2.00                  2.00    -      2.00
  Relative Sat 'X' 0.32                  0.43    -      0.39
  Effective Gr-sec   62                    68    -        62
  Move Time   -sec   64                    70    -        64
  Min/Ped Time-sec   20                    10    -        20
  Prog Factor  PAF 1.00                  1.00    -      1.00
  AvDelay/veh -sec   17                    16    -        18
  Level of Service   C+                    C+    -        C+
  Av.'Q'/ lane veh    6                     7    -         7
  Veh Stopping  %    63                    63    -        66
  Do Veh Clear  ?   YES                   YES    -       YES
___________________|___________________|___________________|_________________

     Whole Intersection - Weighted Av Delay (sec) =  17  Level of Service =  C+
     Critical Movements - Weighted Av Delay (sec) =  17  Level of Service =  C+
        ''        ''    - Intersection Capacity Utilization (ICU) =  0.41

    Predetermined Cycle Length is 134 seconds (All Minimum times are satisfied)

 * CAPSSI (Release 11) - Based on Delay Methodology Per 1985 Highway Capacity Manual
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                         C A P S S I                                [illegible]
                  COMPREHENSIVE ANALYSIS PROGRAM
               FOR A SINGLE SIGNALIZED INTERSECTION *


                        PROJECT CONDITIONS
               SOLUTION USING PREDETERMINED CYCLE TIMES
                                                                 FLN:280moc
 I280/MOORPARK                                   P.M Peak Hour    Scenario  8
 ____________________________________________________________________________
                      |                    |                |                |
   Movement          EBT    EBL    EBR    SBT    SBL    SBR    WBT    WSL    WSR    NBT    NSL    NSR
 Phase 1 -  61 secs   X      .      .      .      .      .      X      .      .      .      .      .
 Phase 2 -  73 secs   .      .      .      .      X      X      .      .      .      .      .      .
 Phase 3 -   0 secs   .      .      .      .      .      .      .      .      .      .      .      .
 Phase 4 -   0 secs   .      .      .      .      .      .      .      .      .      .      .      .
 Phase 5 -   0 secs   .      .      .      .      .      .      .      .      .      .      .      .
 Phase 6 -   0 secs   .      .      .      .      .      .      .      .      .      .      .      .
 ___________________|____________________|___________________|___________________|_______________
                    |                    |                   |                   |
  Critical Mvmt-**                             ****            ****
  Peak 15 Vol -vph   569                       1045     191     698
  Saturation  -vph  3800                       5100    Shrd    3800
  Lost time   -sec  2.00                       2.00      -     2.00
  Relative Sat 'X'  0.34                       0.46      -     0.42
  Effective Gr-sec    59                         71      -       59
  Move Time   -sec    61                         73      -       61
  Min/Ped Time-sec    20                         10      -       20
  Prog Factor  PAF  1.00                       1.00      -     1.00
  AvDelay/veh -sec    19                         15      -       20
  Level of Service    C+                         B-      -       C+
  Av.'Q'/ lane veh     6                          7      -        7
  Veh Stopping  %     66                         62      -       69
  Do Veh Clear  ?    YES                        YES      -      YES
 ___________________|____________________|___________________|___________________|_______________

     Whole Intersection - Weighted Av Delay (sec) =  17  Level of Service =  C+
     Critical Movements - Weighted Av Delay (sec) =  17  Level of Service =  C+
        ''          ''  - Intersection Capacity Utilization (ICU) =  0.44

     Predetermined Cycle Length is 134 seconds (All Minimum times are satisfied)

 * CAPSSI (Release 11) - Based on Delay Methodology Per 1985 Highway Capacity Manual
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                         C A P S S I                                   [illegible]-16-97
                 COMPREHENSIVE ANALYSIS PROGRAM
              FOR A SINGLE SIGNALIZED INTERSECTION *


                      BACKGROUND CONDITIONS
               SOLUTION USING PREDETERMINED CYCLE TIMES
                                                                      FUN:880ste
   880/STEVENS CREEK                                  A.M Peak Hour   Scenario  2
   ______________________________________________________________________________
                     |                    |                   |                 |
        Movement       EBT   EBL   EBR    SBT   SBL   SBR     WBT   WBL   WBR     NBT   NBL   NBR
   Phase 1 -  72 secs   .     .     .      .     .     .       X     .     .       .     .     .
   Phase 2 -  62 secs   .     .     .      .     .     X       .     .     .       .     .     .
   Phase 3 -   0 secs   .     .     .      .     .     .       .     .     .       .     .     .
   Phase 4 -   0 secs   .     .     .      .     .     .       .     .     .       .     .     .
   Phase 5 -   0 secs   .     .     .      .     .     .       .     .     .       .     .     .
   Phase 6 -   0 secs   .     .     .      .     .     .       .     .     .       .     .     .
   __________________|____________________|___________________|_________________
                     |                    |                   |                 |
    Critical Mvmt-**                                  ****    ****
    Peak 15 Vol -vph                                   572    1151
    Saturation  -vph                                  3150    5700
    Lost time   -sec                                  2.00    2.00
    Relative Sat 'X'                                  0.41    0.39
    Effective Gr-sec                                    60      70
    Move Time   -sec                                    62      72
    Min/Ped Time-sec                                     5      14
    Prog Factor  PAF                                  1.00    1.00
    AvDelay/veh -sec                                    19      15
    Level of Service                                    C+      B-
    Av.'Q'/ lane veh                                     6       7
    Veh Stopping  %                                     67      60
    Do Veh Clear  ?                                    YES     YES
   __________________|____________________|___________________|_________________

        Whole Intersection - Weighted Av Delay (sec) =  16  Level of Service =  C+
        Critical Movements - Weighted Av Delay (sec) =  16  Level of Service =  C+
            ''        ''   - Intersection Capacity Utilization (ICU) =  0.40

       Predetermined Cycle Length is 134 seconds (All Minimum times are satisfied)

   * CAPSSI (Release 11) - Based on Delay Methodology Per 1985 Highway Capacity Manual
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                                      C A P S S I                              11-10-97
                              COMPREHENSIVE ANALYSIS PROGRAM
                           FOR A SINGLE SIGNALIZED INTERSECTION *

                                 CUMULATIVE W/PROJECT
                         SOLUTION USING PREDETERMINED CYCLE TIMES
                                                                             FLN:280MOO
 I280/MOORPARK                                          A.M Peak Hour        Scenario  5
 ___________________________________________________________________________________________
                  |                  |                |                 |
   Movement         EBT   EBL   EBR   SBT   SBL   SBR   WBT   WBL   WBR   NBT   NBL   NBR
Phase 1 -  64 secs   X     .     .     .     .     .     X     .     .     .     .     .
Phase 2 -  70 secs   .     .     .     .     X     X     .     .     .     .     .     .
Phase 3 -   0 secs   .     .     .     .     .     .     .     .     .     .     .     .
Phase 4 -   0 secs   .     .     .     .     .     .     .     .     .     .     .     .
Phase 5 -   0 secs   .     .     .     .     .     .     .     .     .     .     .     .
Phase 6 -   0 secs   .     .     .     .     .     .     .     .     .     .     .     .
 _________________|__________________|________________|_________________|__________________
                  |                  |                |                 |
  Critical Mvmt-**  ****                    ****
  Peak 15 Vol -vph   514                     832    13   476
  Saturation  -vph  3800                    5100  Shrd  3800
  Lost time   -sec  2.00                    2.00    -   2.00
  Relative Sat 'X'  0.29                    0.33    -   0.27
  Effective Gr-sec    62                      68    -     62
  Move Time   -sec    64                      70    -     64
  Min/Ped Time-sec    20                      10    -     20
  Prog Factor  PAF  1.00                    1.00    -   1.00
  AvDelay/veh -sec    17                      15    -     17
  Level of Service    C+                      B-    -     C+
  Av.'Q'/ lane veh     5                       5    -      5
  Veh Stopping  %     62                      59    -     61
  Do Veh Clear  ?    YES                     YES    -    YES
 _________________|__________________|________________|_________________|__________________

         Whole Intersection - Weighted Av Delay (sec) =  16  Level of Service =  C+
         Critical Movements - Weighted Av Delay (sec) =  16  Level of Service =  C+
            ''       ''     - Intersection Capacity Utilization (ICU) =  0.31

        Predetermined Cycle Length is 134 seconds (All Minimum times are satisfied)

 * CAPSSI (Release 11) - Based on Delay Methodology Per 1985 Highway Capacity Manual
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                             C A P S S I                                 11-10-97
                     COMPREHENSIVE ANALYSIS PROGRAM
                  FOR A SINGLE SIGNALIZED INTERSECTION *

                          CUMULATIVE W/PROJECT
                 SOLUTION USING PREDETERMINED CYCLE TIMES
                                                                  FLN:880STE
880/STEVENS CREEK                                 A.M Peak Hour   Scenario  5
_____________________________________________________________________________
                     |                  |                  |                  |
     Movement        | EBT   EBL   EBR  | SBT   SBL   SBR  | WBT   WBL   WBR  | NBT   NBL   NBR
Phase 1 -  70 secs     .     .     .      .     .     .      X     .     .      .     .     .
Phase 2 -  64 secs     .     .     .      .     .     X      .     .     .      .     .     .
Phase 3 -   0 secs     .     .     .      .     .     .      .     .     .      .     .     .
Phase 4 -   0 secs     .     .     .      .     .     .      .     .     .      .     .     .
Phase 5 -   0 secs     .     .     .      .     .     .      .     .     .      .     .     .
Phase 6 -   0 secs     .     .     .      .     .     .      .     .     .      .     .     .
_____________________|__________________|__________________|__________________|_______________
                     |                  |                  |                  |
 Critical Mvmt-**                                     ****   ****
 Peak 15 Vol -vph                                      665   1238
 Saturation  -vph                                     3150   5700
 Lost time   -sec                                     2.00   2.00
 Relative Sat 'X'                                     0.46   0.43
 Effective Gr-sec                                       62     68
 Move Time   -sec                                       64     70
 Min/Ped Time-sec                                        5     14
 Prog Factor  PAF                                     1.00   1.00
 AvDelay/veh -sec                                       19     16
 Level of Service                                       C+     C+
 Av.'Q'/ lane veh                                        7      8
 Veh Stopping  %                                        68     63
 Do Veh Clear  ?                                       YES    YES
_____________________|__________________|__________________|__________________|_______________

     Whole Intersection - Weighted Av Delay (sec) =  17  Level of Service =  C+
     Critical Movements - Weighted Av Delay (sec) =  17  Level of Service =  C+
         ''       ''    - Intersection Capacity Utilization (ICU) =  0.44

    Predetermined Cycle Length is 134 seconds (All Minimum times are satisfied)

 * CAPSSI (Release 11) - Based on Delay Methodology Per 1985 Highway Capacity Manual
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                         C A P S S I                              10-16-97
                COMPREHENSIVE ANALYSIS PROGRAM
             FOR A SINGLE SIGNALIZED INTERSECTION *


                      EXISTING CONDITIONS
              SOLUTION USING PREDETERMINED CYCLE TIMES
                                                                 FLN:880ste
880/STEVENS CREEK                              P.M Peak Hour     Scenario  6
_____________________________________________________________________________
                   |                    |                  |
    Movement         EBT   EBL   EBR   SBT   SBL   SBR   WBT   WBL   WBR   NBT   NBL   NBR
Phase 1 -  80 secs    .     .     .     .     .     .     X     .     .     .     .     .
Phase 2 -  54 secs    .     .     .     .     .     X     .     .     .     .     .     .
Phase 3 -   0 secs    .     .     .     .     .     .     .     .     .     .     .     .
Phase 4 -   0 secs    .     .     .     .     .     .     .     .     .     .     .     .
Phase 5 -   0 secs    .     .     .     .     .     .     .     .     .     .     .     .
Phase 6 -   0 secs    .     .     .     .     .     .     .     .     .     .     .     .
___________________|____________________|__________________|__________________
                   |                    |                  |
 Critical Mvmt-**                                ****  ****
 Peak 15 Vol -vph                                 642  17[illegible]
 Saturation  -vph                                3150  5700
 Lost time    -sec                               2.00  2.00
 Relative Sat 'X'                                0.53  0.52
 Effective Gr-sec                                  52    78
 Move Time    -sec                                 54    80
 Min/Ped Time-sec                                   5    14
 Prog Factor  PAF                                1.00  1.00
 AvDelay/veh -sec                                  24    13
 Level of Service                                  C-    B-
 Av.'Q'/ lane veh                                   7     9
 Veh Stopping  %                                   77    60
 Do Veh Clear  ?                                  YES   YES
___________________|____________________|__________________|__________________

      Whole Intersection - Weighted Av Delay (sec) =  16  Level of Service =  C+
      Critical Movements - Weighted Av Delay (sec) =  16  Level of Service =  C+
         ''        ''    - Intersection Capacity Utilization (ICU) =  0.52

      Predetermined Cycle Length is 134 seconds (All Minimum times are satisfied)

 * CAPSSI (Release 11) - Based on Delay Methodology Per 1985 Highway Capacity Manual
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                         C A P S S I                                   -16-97
                COMPREHENSIVE ANALYSIS PROGRAM
             FOR A SINGLE SIGNALIZED INTERSECTION *


                    BACKGROUND CONDITIONS
            SOLUTION USING PREDETERMINED CYCLE TIMES
                                                                   FN:880ste
 880/STEVENS CREEK                              P.M Peak hour     Scenario  7
 ____________________________________________________________________________
                     |                   |                  |
     Movement          EBT   EBL   EBR   SBT   SBL   SBR   WBT   WBL   WBR   NBT   NBL   NBR
 Phase 1 -  80 secs     .     .     .     .     .     .     X     .     .     .     .     .
 Phase 2 -  54 secs     .     .     .     .     .     X     .     .     .     .     .     .
 Phase 3 -   0 secs     .     .     .     .     .     .     .     .     .     .     .     .
 Phase 4 -   0 secs     .     .     .     .     .     .     .     .     .     .     .     .
 Phase 5 -   0 secs     .     .     .     .     .     .     .     .     .     .     .     .
 Phase 6 -   0 secs     .     .     .     .     .     .     .     .     .     .     .     .
 ____________________|___________________|__________________|_______________|______________
                     |                   |                  |
  Critical Mvmt-**                                   ****  ****
  Peak 15 Vol -vph                                    715  1923
  Saturation  -vph                                   3150  5700
  Lost time   -sec                                   2.00  2.00
  Relative Sat 'X'                                   0.58  0.58
  Effective Gr-sec                                     52    78
  Move Time   -sec                                     54    80
  Min/Ped Time-sec                                      5    14
  Prog Factor  PAF                                   1.00  1.00
  AvDelay/veh -sec                                     25    14
  Level of Service                                     D+    B-
  Av.'Q'/ lane veh                                      8    10
  Veh Stopping  %                                      79    63
  Do Veh Clear  ?                                     YES   YES
 ____________________|___________________|__________________|_______________|______________

      Whole Intersection - Weighted Av Delay (sec) =  17  Level of Service =  C+
      Critical Movements - Weighted Av Delay (sec) =  17  Level of Service =  C+
         ''        ''    - Intersection Capacity Utilization (ICU) =  0.58

      Predetermined Cycle Length is 134 seconds (All Minimum times are satisfied)

 * CAPSSI (Release 11) - Based on Delay Methodology Per 1985 Highway Capacity Manual
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                              C A P S S I                               10-16-97
                     COMPREHENSIVE ANALYSIS PROGRAM
                  FOR A SINGLE SIGNALIZED INTERSECTION *


                           PROJECT CONDITIONS
                 SOLUTION USING PREDETERMINED CYCLE TIMES
                                                                    FLN:880ste
 880/STEVENS CREEK                                    P.M Peak Hour   Scenario  3
 _________________________________________________________________________________
                   |                    |                  |                  |
    Movement         EBT   EBL   EBR      SBT   SBL   SBR    WBT   WBL   WBR    NBT   NBL   NBR
 Phase 1 -  75 secs    .     .     .        .     .     .      X     .     .      .     .     .
 Phase 2 -  59 secs    .     .     .        .     .     X      .     .     .      .     .     .
 Phase 3 -   0 secs    .     .     .        .     .     .      .     .     .      .     .     .
 Phase 4 -   0 secs    .     .     .        .     .     .      .     .     .      .     .     .
 Phase 5 -   0 secs    .     .     .        .     .     .      .     .     .      .     .     .
 Phase 6 -   0 secs    .     .     .        .     .     .      .     .     .      .     .     .
 __________________|____________________|__________________|__________________|__________
                   |                    |                  |                  |
  Critical Mvmt-**                                    ****   ****
  Peak 15 Vol -vph                                     911   2096
  Saturation  -vph                                    3150   5700
  Lost time   -sec                                    2.00   2.00
  Relative Sat 'X'                                    0.68   0.67
  Effective Gr-sec                                      57     73
  Move Time   -sec                                      59     75
  Min/Ped Time-sec                                       5     14
  Prog Factor  PAF                                    1.00   1.00
  AvDelay/veh -sec                                      25     17
  Level of Service                                      C-     C+
  Av.'Q'/ lane veh                                      10     12
  Veh Stopping  %                                       81     72
  Do Veh Clear  ?                                      YES    YES
 __________________|____________________|__________________|__________________|__________

      Whole Intersection - Weighted Av Delay (sec) =  19  Level of Service =  C+
      Critical Movements - Weighted Av Delay (sec) =  19  Level of Service =  C+
          ''       ''    - Intersection Capacity Utilization (ICU) =  0.68

     Predetermined Cycle Length is 134 seconds (All Minimum times are satisfied)

 * CAPSSI (Release 11) - Based on Delay Methodology Per 1985 Highway Capacity Manual
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                         C A P S S I                                11-10-97
                 COMPREHENSIVE ANALYSIS PROGRAM
              FOR A SINGLE SIGNALIZED INTERSECTION *

                       CUMULATIVE W/PROJECT
               SOLUTION USING PREDETERMINED CYCLE TIMES
                                                                 FLN:880STE
880/STEVENS CREEK                                 P.M Peak Hour  Scenario 10
_____________________________________________________________________________
                       |                    |                   |
     Movement       EBT   EBL   EBR    SBT   SBL   SBR    WBT   WBL   WBR   NBT   NBL   NBR
   Phase 1 -  75 secs  .     .     .      .     .     .      X     .     .     .     .     .
   Phase 2 -  59 secs  .     .     .      .     .     X      .     .     .     .     .     .
   Phase 3 -   0 secs  .     .     .      .     .     .      .     .     .     .     .     .
   Phase 4 -   0 secs  .     .     .      .     .     .      .     .     .     .     .     .
   Phase 5 -   0 secs  .     .     .      .     .     .      .     .     .     .     .     .
   Phase 6 -   0 secs  .     .     .      .     .     .      .     .     .     .     .     .
_______________________|____________________|___________________|_____________
                       |                    |                   |
     Critical Mvmt-**                                 ****   ****
     Peak 15 Vol -vph                                  937   2162
     Saturation  -vph                                 3150   5700
     Lost time   -sec                                 2.00   2.00
     Relative Sat 'X'                                 0.70   0.70
     Effective Gr-sec                                   57     73
     Move Time   -sec                                   59     75
     Min/Ped Time-sec                                    5     14
     Prog Factor  PAF                                 1.00   1.00
     AvDelay/veh -sec                                   25     17
     Level of Service                                   D+     C+
     Av.'Q'/ lane veh                                   10     12
     Veh Stopping  %                                    82     73
     Do Veh Clear  ?                                   YES    YES
_______________________|____________________|___________________|_____________

      Whole Intersection - Weighted Av Delay (sec) =  20  Level of Service =  C+
      Critical Movements - Weighted Av Delay (sec) =  20  Level of Service =  C+
          ''         ''  - Intersection Capacity Utilization (ICU) =  0.70

      Predetermined Cycle Length is 134 seconds (All Minimum times are satisfied)

 * CAPSSI (Release 11) - Based on Delay Methodology Per 1985 Highway Capacity Manual
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97-036

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                              C A P S S I                               11-16-97
                   COMPREHENSIVE ANALYSIS PROGRAM
                FOR A SINGLE SIGNALIZED INTERSECTION *


                          EXISTING CONDITIONS
                  SOLUTION USING PREDETERMINED CYCLE TIMES
                                                                   FLN:sanste
 SAN TOMAS/STEVENS CREEK                            A.M Peak Hour    Scenario  1
 ______________________________________________________________________________
                    |                    |                   |
  Movement          EBT   EBL   EBR   SBT   SBL   SBR   WBT   WBL   WBR   NBT   NBL   NBR
 Phase 1 -  17 secs   .     X     .     .     .     X     .     .     .     .     .     X
 Phase 2 -   2 secs   .     .     .     .     .     .     X     .     X     .     .     X
 Phase 3 -  35 secs   X     .     X     .     .     .     X     .     X     .     .     .
 Phase 4 -  21 secs   .     .     X     .     X     .     .     .     .     .     X     .
 Phase 5 -   0 secs   .     .     .     X     X     X     .     .     .     .     .     .
 Phase 6 - 115 secs   .     .     .     X     .     X     .     .     .     X     .     X
 ___________________|____________________|___________________|__________________
                    |                    |                   |
 Critical Mvmt-**         ****                  ****              ****  ****
 Peak 15 Vol -vph   431    98   109   552    92    45   729   110   124  2757   261    72
 Saturation  -vph  5700  1500  Shrd  3800  3150  1750  5700  3150  Shrd  5700  3150  1750
 Lost time   -sec  2.00  2.00    -   2.00  2.00  2.00  2.00  2.00    -   2.00  2.00  2.00
 Relative Sat 'X'  0.55  0.83    -   0.24  0.29  0.04  0.81  0.39    -   0.81  0.83  0.06
 Effective Gr-sec    33    15    -    113    19   130    35    17    -    113    19   132
 Move Time   -sec    35    17    -    115    21   132    37    19    -    115    21   134
 Min/Ped Time-sec    20    10    -     20    10    20    20    10    -     20    10    20
 Prog Factor  PAF  1.00  1.00    -   1.00  1.00  1.00  1.00  1.00    -   1.00  1.00  1.00
 AvDelay/veh -sec    55    90    -     14    60     7    60    53    -     24    75     7
 Level of Service     E     F    -     B-     F    B+    E-     E    -     C-     F    B+
 Av.'Q'/ lane veh     8     5    -      6     2     1    12     3    -     20     6     1
 Veh Stopping  %     91    99    -     47    93    32    96    94    -     78    98    32
 Do Veh Clear  ?    YES   YES    -    YES   YES   YES   YES   YES    -    YES   YES   YES
 ___________________|____________________|___________________|__________________

      Whole Intersection - Weighted Av Delay (sec) =  37  Level of Service =  D-
      Critical Movements - Weighted Av Delay (sec) =  37  Level of Service =  D-
          ''        ''    - Intersection Capacity Utilization (ICU) =  0.82

     Predetermined Cycle Length is 190 seconds (Min. times may not be satisfied)

 * CAPSSI (Release 11) - Based on Delay Methodology Per 1985 Highway Capacity Manual
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                         C A P S S I                                  -16-97
              COMPREHENSIVE ANALYSIS PROGRAM
           FOR A SINGLE SIGNALIZED INTERSECTION *


                    BACKGROUND CONDITIONS
           SOLUTION USING PREDETERMINED CYCLE TIMES
                                                                  FLN:sanste
 SAN TOMAS/STEVENS CREEK                          A.M Peak Hour    Scenario  2
 _____________________________________________________________________________
                      |                 |                 |                |
     Movement          EBT   EBL   EBR   SBT   SBL   SBR   WBT   WBL   WBR   NBT   NBL   NBR
 Phase 1 -   17 secs    .     X     .     .     .     X     .     X     .     .     .     X
 Phase 2 -    2 secs    .     .     .     .     .     .     X     X     X     .     .     X
 Phase 3 -   35 secs    X     .     X     .     .     .     X     .     X     .     .     .
 Phase 4 -   21 secs    .     .     X     .     X     .     .     .     .     .     X     .
 Phase 5 -    0 secs    .     .     .     X     X     X     .     .     .     .     .     .
 Phase 6 -  115 secs    .     .     .     X     .     X     .     .     .     .     .     X
 _____________________|_________________|_________________|________________|____________
                      |                 |                 |                |
  Critical Mvmt-**           ****                          ****              ****  ****
  Peak 15 Vol -vpn      -35    98 [illegible] 552 [illegible] -5  731 [illegible] [illegible] [illegible] [illegible] 72
  Saturation  -vpn     5700  1500  Shrd  3800  3150  1750  5700  3150  Shrd  [illegible] 3150  1750
  Lost time   -sec     2.00  2.00   -    2.00  2.00  2.00  2.00  2.00   -    2.00  2.00  2.00
  Relative Sat 'X'     0.55  0.83   -    0.24  0.29  0.04  0.81  0.39   -    0.91  0.83  0.06
  Effective Gr-sec       33    15   -     113    19   130    35    17   -     113    19   132
  Move Time   -sec       35    17   -     115    21   132    37    19   -     115    21   134
  Min/Ped Time-sec       20    10   -      20    10    20    20    10   -      20    10    20
  Prog Factor  PAF     1.00  1.00   -    1.00  1.00  1.00  1.00  1.00   -    1.00  1.00  1.00
  AvDelay/veh -sec       55    90   -      14    60     7    60    63   -      24    75     7
  Level of Service       E-     F   -      B-     F    B+     F     F   -      C-     F    B+
  Av.'Q'/ lane veh        8     5   -       6     2     1    12     3   -      20     6     1
  Veh Stopping  %        91    99   -      47    93    32    96    94   -      78    98    32
  Do Veh Clear  ?       YES   YES   -     YES   YES   YES   YES   YES   -     YES   YES   YES
 _____________________|_________________|_________________|________________|____________

      Whole Intersection - Weighted Av Delay (sec) =  37  Level of Service =  D-
      Critical Movements - Weighted Av Delay (sec) =  37  Level of Service =  D-
          ''        ''     - Intersection Capacity Utilization (ICU) =  0.82

     Predetermined Cycle Length is 190 seconds (Min. times may not be satisfied)

 * CAPSSI (Release 11) - Based on Delay Methodology Per 1985 Highway Capacity Manual
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97-036

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                              C A P S S I                              [illegible]-16-97
                   COMPREHENSIVE ANALYSIS PROGRAM
                 FOR A SINGLE SIGNALIZED INTERSECTION *


                          PROJECT CONDITIONS
                 SOLUTION USING PREDETERMINED CYCLE TIMES
                                                                     FLN:sanste
SAN TOMAS/STEVENS CREEK                            A.M Peak Hour      Scenario  3
______________________________________________________________________________
                     |                 |                 |                 |
   Movement           EBT   EBL   EBR   SBT   SBL   SBR   WBT   WBL   WBR   NBT   NBL   NBR
Phase 1 -  17 secs     .     X     .     .     .     X     .     X     .     .     .     X
Phase 2 -   2 secs     .     .     .     .     .     .     X     X     X     .     .     X
Phase 3 -  37 secs     X     .     X     .     .     .     X     .     X     .     .     .
Phase 4 -  21 secs     .     .     X     .     X     .     .     .     .     .     X     .
Phase 5 -   0 secs     .     .     .     X     X     X     .     .     .     .     .     .
Phase 6 - 113 secs     .     .     .     X     .     X     .     .     .     X     .     X
_____________________|_________________|_________________|_________________|__________
                     |                 |                 |                 |
 Critical Mvmt-**           ****                          ****              ****  ****
 Peak 15 Vol -vpn    [illegible]49  98  [illegible]  552  [illegible]  [illegible]5  [illegible]55  [illegible]  168  [illegible]  262  72
 Saturation  -vpn    5700  1500  Shrd  3800  3150  1750  5700  3150  Shrd  5700  3150  1750
 Lost time   -sec    2.00  2.00   -    2.00  2.00  2.00  2.00  2.00   -    2.00  2.00  2.00
 Relative Sat 'X'    0.53  0.83   -    0.25  0.37  0.04  0.83  0.39   -    0.83  0.83  0.06
 Effective Gr-sec      35    15   -     111    19   128    37    17   -     111    19   130
 Move Time   -sec      37    17   -     113    21   130    39    19   -     113    21   132
 Min/Ped Time-sec      20    10   -      20    10    20    20    10   -      20    10    20
 Prog Factor  PAF    1.00  1.00   -    1.00  1.00  1.00  1.00  1.00   -    1.00  1.00  1.00
 AvDelay/veh -sec      54    90   -      15    61     8    60    63   -      26    75     8
 Level of Service       E     F   -      B-     F    B+    E-     F   -      D+     F    B+
 Av.'Q'/ lane veh       8     5   -       6     3     1    13     3   -      20     6     1
 Veh Stopping  %       90    99   -      49    93    33    96    94   -      81    98    33
 Do Veh Clear  ?      YES   YES   -     YES   YES   YES   YES   YES   -     YES   YES   YES
_____________________|_________________|_________________|_________________|__________

      Whole Intersection - Weighted Av Delay (sec) =  38  Level of Service =  D-
      Critical Movements - Weighted Av Delay (sec) =  38  Level of Service =  D-
        ''          ''   - Intersection Capacity Utilization (ICU) =  0.83

     Predetermined Cycle Length is 190 seconds (Min. times may not be satisfied)

* CAPSSI (Release 11) - Based on Delay Methodology Per 1985 Highway Capacity Manual
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                              C A P S S I                                 11-10-97
                     COMPREHENSIVE ANALYSIS PROGRAM
                   FOR A SINGLE SIGNALIZED INTERSECTION *

                           CUMULATIVE W/PROJECT
                   SOLUTION USING PREDETERMINED CYCLE TIMES
                                                                         FLN:SANSTE
 SAN TOMAS/STEVENS CREEK                                A.M Peak Hour    Scenario  5

 ____________________________________________________________________________________
                        |                   |                   |
      Movement           EBT   EBL   EBR   SBT   SBL   SBR   WBT   WBL   WBR   NBT   NBL   NBR
 Phase 1 -   17 secs      .     X     .     .     .     X     .     X     .     .     .     X
 Phase 2 -    2 secs      .     .     .     .     .     .     X     X     X     .     .     X
 Phase 3 -   37 secs      X     .     X     .     .     .     X     .     X     .     .     .
 Phase 4 -   21 secs      .     .     X     .     X     .     .     .     .     .     X     .
 Phase 5 -    0 secs      .     .     .     X     X     X     .     .     .     .     .     .
 Phase 6 -  113 secs      .     .     .     X     .     X     .     .     .     X     .     X
 _______________________|___________________|___________________|____________________
                        |                   |                   |
  Critical Mvmt-**            ****                          ****              ****  ****
  Peak 15 Vol -vph      452    98   111   552   120    45   757   112   171  2757   262    74
  Saturation  -vph     5700  1500  Shrd  3800  3150  1750  5700  3150  Shrd  5700  3150  1750
  Lost time   -sec     2.00  2.00    -   2.00  2.00  2.00  2.00  2.00    -   2.00  2.00  2.00
  Relative Sat 'X'     0.54  0.83    -   0.25  0.38  0.04  0.84  0.40    -   0.83  0.83  0.06
  Effective Gr-sec       35    15    -    111    19   128    37    17    -    111    19   130
  Move Time   -sec       37    17    -    113    21   130    39    19    -    113    21   132
  Min/Ped Time-sec       20    10    -     20    10    20    20    10    -     20    10    20
  Prog Factor  PAF     1.00  1.00    -   1.00  1.00  1.00  1.00  1.00    -   1.00  1.00  1.00
  AvDelay/veh -sec       54    90    -     15    61     8    60    63    -     26    75     8
  Level of Service       E     F     -     B-    F     B+    E-    F     -     D+    F     B+
  Av.'Q'/ lane veh        8     5    -      6     3     1    13     3    -     20     6     1
  Veh Stopping  %        91    99    -     49    94    33    96    94    -     81    98    33
  Do Veh Clear  ?       YES   YES    -    YES   YES   YES   YES   YES    -    YES   YES   YES
 _______________________|___________________|___________________|____________________

         Whole Intersection - Weighted Av Delay (sec) =  38  Level of Service =  D-
         Critical Movements - Weighted Av Delay (sec) =  38  Level of Service =  D-
            ''        ''    - Intersection Capacity Utilization (ICU) =  0.83

        Predetermined Cycle Length is 190 seconds (Min. times may not be satisfied)

 * CAPSSI (Release 11) - Based on Delay Methodology Per 1985 Highway Capacity Manual
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97-036

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                           C A P S S I                                 1-16-97
                COMPREHENSIVE ANALYSIS PROGRAM
             FOR A SINGLE SIGNALIZED INTERSECTION *


                     EXISTING CONDITIONS
           SOLUTION USING PREDETERMINED CYCLE TIMES
                                                                     FN:sanste
 SAN TOMAS/STEVENS CREEK                             P.M Peak Hour   Scenario  6
 ________________________________________________________________________________
                    |                      |                     |
   Movement          EBT   EBL   EBR   SBT   SBL   SBR   WBT   WBL   WBR   NBT   NBL   NBR
 Phase 1 -  10 secs   .     X     .     .     .     X     .     X     .     .     .     X
 Phase 2 -   9 secs   .     .     .     .     .     .     X     X     X     .     .     X
 Phase 3 -  47 secs   X     .     X     .     .     .     X     .     X     .     .     .
 Phase 4 -  14 secs   .     .     X     .     X     .     .     .     .     .     X     .
 Phase 5 -  10 secs   .     .     .     X     X     X     .     .     .     .     .     .
 Phase 6 - 101 secs   .     .     .     X     .     X     .     .     .     .     .     X
 ___________________|______________________|_____________________|:______________________
                    |                      |                     :
 Critical Mvmt-**    ****                  ****                  ****              ****
 Peak 15 Vol -vph    955    60   373  2153   321   126   915   333  [illegible]  [illegible]  190   182
 Saturation  -vph   5700  1500  Shrd  3800  3150  1750  5700  3150  Shrd  5700  3150  1750
 Lost time   -sec   2.00  2.00    -   2.00  2.00  2.00  2.00  2.00    -   2.00  2.00  2.00
 Relative Sat 'X'   0.99  0.96    -   0.99  0.88  0.12  0.67  1.01    -   0.23  0.96  0.17
 Effective Gr-sec     45     8    -    109    22   119    54    77    -     99    12   118
 Move Time   -sec     47    10    -    111    24   121    56    79    -    101    14   120
 Min/Ped Time-sec     20    10    -     20    10    20    20    10    -     20    10    20
 Prog Factor  PAF   1.00  1.00    -   1.00  1.00  1.00  1.00  1.00    -   1.00  1.00  1.00
 AvDelay/veh -sec     71   140    -     44    79    11    47   110    -     19   106    12
 Level of Service      F     F    -     E+     F    B-     E     F    -     C+     F    B-
 Av.'Q'/ lane veh     18     3    -     25     8     3    14     7    -      6     5     4
 Veh Stopping  %     100   100    -     99    99    41    89   100    -     55   100    43
 Do Veh Clear  ?     YES    NO    -    YES   YES   YES   YES    NO    -    YES   YES   YES
 ___________________|______________________|_____________________|_______________________
                        >>>>  Intersection Unstable  <<<<

      Whole Intersection - Weighted Av Delay (sec) =  53  Level of Service =  E
      Critical Movements - Weighted Av Delay (sec) =  61  Level of Service =  F
         ''        ''    - Intersection Capacity Utilization (ICU) =  0.99

     Predetermined Cycle Length is 191 seconds (Min. times may not be satisfied)

 * CAPSSI (Release 11) - Based on Delay Methodology Per 1985 Highway Capacity Manual
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                         C A P S S I                                10-16-97
                COMPREHENSIVE ANALYSIS PROGRAM
             FOR A SINGLE SIGNALIZED INTERSECTION *


                      BACKGROUND CONDITIONS
              SOLUTION USING PREDETERMINED CYCLE TIMES
                                                                 FLN:sanste
SAN TOMAS/STEVENS CREEK                          P.M Peak Hour   Scenario  7
______________________________________________________________________________
                    |                  |                  |
   Movement        EBT   EBL   EBR   SBT   SBL   SBR   WBT   WBL   WBR   NBT   NBL   NBR
 Phase 1 -  10 secs  .     X     .     .     .     X     .     X     .     .     .     X
 Phase 2 -   9 secs  .     .     .     .     .     .     X     X     X     .     .     X
 Phase 3 -  47 secs  X     .     X     .     .     .     X     .     X     .     .     .
 Phase 4 -  14 secs  .     .     X     .     X     .     .     .     .     .     X     .
 Phase 5 -  10 secs  .     .     .     X     X     X     .     .     .     .     .     .
 Phase 6 - 101 secs  .     .     .     X     .     X     .     .     .     X     .     X
____________________|__________________|__________________|___________________________
                    |                  |                  |
  Critical Mvmt-** ****              ****                    ****              ****
  Peak 15 Vol -vph  [illegible] 60   371  2153 [illegible] 126  919   233 [illegible] [illegible] 192  182
  Saturation  -vph 5700  1500  Shrd  3800  3150  1750  5700  3150  Shrd  5700  3150  1750
  Lost time   -sec 2.00  2.00   -    2.00  2.00  2.00  2.00  2.00   -    2.00  2.00  2.00
  Relative Sat 'X' 0.99  0.96   -    0.99  0.88  0.12  0.68  1.01   -    0.23  0.97  0.17
  Effective Gr-sec   45     8   -     109    22   119    54    17   -      99    12   118
  Move Time   -sec   47    10   -     111    24   121    56    19   -     101    14   120
  Min/Ped Time-sec   20    10   -      20    10    20    20    10   -      20    10    20
  Prog Factor  PAF 1.00  1.00   -    1.00  1.00  1.00  1.00  1.00   -    1.00  1.00  1.00
  AvDelay/veh -sec   72   140   -      44    79    11    47   110   -      19   109    12
  Level of Service    F     F   -      E+     F    B-     E     F   -      C+     F    B-
  Av.'Q'/ lane veh   18     3   -      25     8     3    14     7   -       6     5     4
  Veh Stopping  %   100   100   -      99    99    41    89   100   -      55   100    43
  Do Veh Clear  ?   YES    NO   -     YES   YES   YES   YES    NO   -     YES   YES   YES
____________________|__________________|__________________|___________________________
                       >>>>  Intersection Unstable  <<<<

      Whole Intersection - Weighted Av Delay (sec) =  54  Level of Service =  E
      Critical Movements - Weighted Av Delay (sec) =  61  Level of Service =  F
         ''         ''   - Intersection Capacity Utilization (ICU) =  0.99

      Predetermined Cycle Length is 191 seconds (Min. times may not be satisfied)

  * CAPSSI (Release 11) - Based on Delay Methodology Per 1985 Highway Capacity Manual
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97-036

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                    C A P S S I                                   10-16-97
            COMPREHENSIVE ANALYSIS PROGRAM
          FOR A SINGLE SIGNALIZED INTERSECTION *


                      PROJECT CONDITIONS
            SOLUTION USING PREDETERMINED CYCLE TIMES
                                                                FLN:sanste
 SAN TOMAS/STEVENS CREEK                        P.M Peak Hour   Scenario  8
 ___________________________________________________________________________
                  |                 |                 |                 |
 Movement           EBT   EBL   EBR   SBT   SBL   SBR   WBT   WBL   WBR   NBT   NBL   NBR
 Phase 1 -  10 secs  .     X     .     .     .     X     .     X     .     .     .     X
 Phase 2 -   9 secs  .     .     .     .     .     .     X     X     X     .     .     X
 Phase 3 -  47 secs  X     .     X     .     .     .     X     .     X     .     .     .
 Phase 4 -  14 secs  .     .     X     .     X     .     .     .     .     .     X     .
 Phase 5 -  13 secs  .     .     .     X     X     X     .     .     .     .     .     .
 Phase 6 -  97 secs  .     .     .     X     .     X     .     .     .     X     .     X
 _________________|_________________|_________________|_________________|__________
                  |                 |                 |                 |
 Critical Mvmt-**   ****              ****                    ****              ****
 Peak 15 Vol -vph   992    60   371  2153   379   126   946   383   313 [illegible]74 172 182
 Saturation  -vph  5700  1500  Shrd  3800  3150  1750  5700  3150  Shrd  5700  3150  1750
 Lost time   -sec  2.00  2.00    -   2.00  2.00  2.00  2.00  2.00    -   2.00  2.00  2.00
 Relative Sat 'X'  1.01  0.95    -   1.00  0.91  0.12  0.72  1.00    -   0.24  0.97  0.17
 Effective Gr-sec    45     8    -    108    25   118    54    17    -     95    12   114
 Move Time   -sec    47    10    -    110    27   120    56    19    -     97    14   116
 Min/Ped Time-sec    20    10    -     20    10    20    20    10    -     20    10    20
 Prog Factor  PAF  1.00  1.00    -   1.00  1.00  1.00  1.00  1.00    -   1.00  1.00  1.00
 AvDelay/veh -sec    76   138    -     45    79    11    48   108    -     20   107    13
 Level of Service     F     F    -      E     F    B-     E     F    -     C-     F    B-
 Av.'Q'/ lane veh    18     3    -     25     9     3    15     7    -      6     5     4
 Veh Stopping  %    100   100    -    100    99    41    90   100    -     57   100    45
 Do Veh Clear  ?     NO    NO    -     NO   YES   YES   YES    NO    -    YES   YES   YES
 _________________|_________________|_________________|_________________|__________
                     >>>>  Intersection Unstable  <<<<

      Whole Intersection - Weighted Av Delay (sec) =  55   Level of Service =  E-
      Critical Movements - Weighted Av Delay (sec) =  63   Level of Service =  F
           ''       ''   - Intersection Capacity Utilization (ICU) =  1.00

     Predetermined Cycle Length is 190 seconds (Min. times may not be satisfied)

 * CAPSSI (Release 11) - Based on Delay Methodology Per 1985 Highway Capacity Manual
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                              C A P S S I                               11-10-97
                     COMPREHENSIVE ANALYSIS PROGRAM
                 FOR A SINGLE SIGNALIZED INTERSECTION *

                          CUMULATIVE W/PROJECT
                  SOLUTION USING PREDETERMINED CYCLE TIMES
                                                                       FLN:SANSTE
  SAN TOMAS/STEVENS CREEK                               P.M Peak Hour   Scenario 10
 ____________________________________________________________________________________
                     |                   |                   |                   |
    Movement         EBT    EBL    EBR    SBT    SBL    SBR    WBT    WBL    WBR    NBT    NBL    NBR
 Phase 1 -   9 secs   .      X      .      .      .      X      .      X      .      .      .      X
 Phase 2 -  10 secs   .      .      .      .      .      .      X      X      X      .      .      X
 Phase 3 -  48 secs   X      .      X      .      .      .      X      .      X      .      .      .
 Phase 4 -  14 secs   .      .      X      .      X      .      .      .      .      .      X      .
 Phase 5 -  14 secs   .      .      .      X      X      X      .      .      .      .      .      .
 Phase 6 -  95 secs   .      .      .      X      .      X      .      .      .      X      .      X
 ____________________|___________________|___________________|___________________|____________
                     |                   |                   |                   |
  Critical Mvmt-**   ****                ****                       ****                ****
  Peak 15 Vol -vph   1005     60    371   2153    395    126    959    291    219    674    192    190
  Saturation  -vph   5700   1500   Shrd   3800   3150   1750   5700   3150   Shrd   5700   3150   1750
  Lost time   -sec   2.00   2.00     -    2.00   2.00   2.00   2.00   2.00     -    2.00   2.00   2.00
  Relative Sat 'X'   1.00   1.09     -    1.01   0.92   0.12   0.70   1.03     -    0.24   0.97   0.18
  Effective Gr-sec     46      7     -     107     26    116     56     17     -      93     12    112
  Move Time   -sec     48      9     -     109     28    118     58     19     -      95     14    114
  Min/Ped Time-sec     20     10     -      20     10     20     20     10     -      20     10     20
  Prog Factor  PAF   1.00   1.00     -    1.00   1.00   1.00   1.00   1.00     -    1.00   1.00   1.00
  AvDelay/veh -sec     73    203     -      48     79     12     46    117     -      21    107     14
  Level of Service      F      F     -       E      F     B-      E      F     -      C-      F     B-
  Av.'Q'/ lane veh     18      4     -      25      9      3     15      7     -       6      5      4
  Veh Stopping  %     100    100     -     100     99     42     89    100     -      58    100     46
  Do Veh Clear  ?     YES     NO     -      NO    YES    YES    YES     NO     -     YES    YES    YES
 ____________________|___________________|___________________|___________________|____________
               >>>>  Intersection Oversaturated - Delay Values Not Meaningful!  <<<<

         Whole Intersection - Weighted Av Delay (sec) =  56  Level of Service =  E-
         Critical Movements - Weighted Av Delay (sec) =  64  Level of Service =  F
            ''        ''    - Intersection Capacity Utilization (ICU) =  1.00

        Predetermined Cycle Length is 190 seconds (Min. times may not be satisfied)

 * CAPSSI (Release 11) - Based on Delay Methodology Per 1985 Highway Capacity Manual
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                              C A P S S I                                10-16-97
                     COMPREHENSIVE ANALYSIS PROGRAM
                  FOR A SINGLE SIGNALIZED INTERSECTION *


                          EXISTING CONDITIONS
                  SOLUTION USING PREDETERMINED CYCLE TIMES
                                                                       FN:sanmoo
SAN TOMAS/MOORPARK                                   A.M Peak Hour     Scenario  1
_____________________________________________________________________________________
                         |                 |                 |                 |
  Movement                 EBT   EBL   EBR   SBT   SBL   SBR   WBT   WBL   WBR   NBT   NBL   NBR
Phase 1 -  22 secs          .     X     .     .     .     .     .     X     .     .     .     .
Phase 2 -   2 secs          .     .     .     .     .     .     X     X     X     .     .     .
Phase 3 -  34 secs          X     .     X     .     .     .     X     .     X     .     .     .
Phase 4 -  14 secs          .     .     X     .     X     .     .     .     .     .     X     .
Phase 5 -   3 secs          .     .     .     X     X     X     .     .     .     .     .     .
Phase 6 - 105 secs          .     .     .     X     .     X     .     .     .     X     .     X
_________________________|_________________|_________________|_________________|_____________
                         |                 |                 |                 |
  Critical Mvmt-**               ****              ****                    ****  ****
  Peak 15 Vol -vph         172   174    69   560   128    79   326    73   296  2892   131    81
  Saturation  -vph        3800  1750  1750  3800  1750  1750  3800  1750  1750  5700  3150  1750
  Lost time   -sec        2.00  2.00  2.00  2.00  2.00  2.00  2.00  2.00  2.00  2.00  2.00  2.00
  Relative Sat 'X'        0.25  0.89  0.15  0.25  0.88  0.08  0.45  0.34  0.90  0.89  0.86  0.08
  Effective Gr-sec          32    20    46   106    15   106    34    22    34   103    12   103
  Move Time   -sec          34    22    48   108    17   108    36    24    36   105    14   105
  Min/Ped Time-sec          20    10    20    20    10    20    20    10    20    20    10    20
  Prog Factor  PAF        1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
  AvDelay/veh -sec          48    86    39    14    90    12    50    55    72    28    83    13
  Level of Service           E     F    D-    B-     F    B-     E    E-     F    D+     F    B-
  Av.'Q'/ lane veh           4     8     3     6     6     2     7     3    12    21     4     2
  Veh Stopping  %           86    99    78    48    99    43    89    92    98    87    99    45
  Do Veh Clear  ?          YES   YES   YES   YES   YES   YES   YES   YES   YES   YES   YES   YES
_________________________|_________________|_________________|_________________|_____________

      Whole Intersection - Weighted Av Delay (sec) =  37  Level of Service =  D-
      Critical Movements - Weighted Av Delay (sec) =  37  Level of Service =  D-
        ''         ''     - Intersection Capacity Utilization (ICU) =  0.89

     Predetermined Cycle Length is 180 seconds (Min. times may not be satisfied)

* CAPSSI (Release 11) - Based on Delay Methodology Per 1985 Highway Capacity Manual
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                              C A P S S I                           10-16-97
                     COMPREHENSIVE ANALYSIS PROGRAM
                  FOR A SINGLE SIGNALIZED INTERSECTION *


                          BACKGROUND CONDITIONS
                  SOLUTION USING PREDETERMINED CYCLE TIMES
                                                                   FLN:sanmoo
SAN TOMAS/MOORPARK                                  A.M Peak Hour  Scenario  2
______________________________________________________________________________
                |                 |                |                |
  Movement        EBT   EBL   EBR   SBT   SBL   SBR   WBT   WBL   WBR   NBT   NBL   NBR
Phase 1 -  22 secs  .     X     .     .     .     .     .     X     .     .     .     .
Phase 2 -   2 secs  .     .     .     .     .     .     X     X     X     .     .     .
Phase 3 -  34 secs  X     .     X     .     .     .     X     .     X     .     .     .
Phase 4 -  14 secs  .     .     X     .     X     .     .     .     .     .     X     .
Phase 5 -   3 secs  .     .     .     X     X     X     .     .     .     .     .     .
Phase 6 - 105 secs  .     .     .     X     .     X     .     .     .     X     .     X
________________|_________________|________________|________________|_____________
                |                 |                |                |
 Critical Mvmt-**        ****              ****                  ****  ****
 Peak 15 Vol -vph  172   174    59   560   128    79   326 [illegible] 396 [illegible] [illegible] 81
 Saturation  -vph 3800  1750  1750  3800  1750  1750  3800  1750  1750  5700  3150  1750
 Lost time   -sec 2.00  2.00  2.00  2.00  2.00  2.00  2.00  2.00  2.00  2.00  2.00  2.00
 Relative Sat 'X' 0.25  0.89  0.15  0.25  0.88  0.08  0.45  0.34  0.90  0.89  0.86  0.08
 Effective Gr-sec   32    20    46   106    15   106    34    22    34   103    12   103
 Move Time   -sec   34    22    48   108    17   108    36    24    36   105    14   105
 Min/Ped Time-sec   20    10    20    20    10    20    20    10    20    20    10    20
 Prog Factor  PAF 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 AvDelay/veh -sec   48    86    39    14    90    12    50    55    72    28    83    13
 Level of Service    E     F    D-    B-     F    B-     E    E-     F    D+     F    B-
 Av.'Q'/ lane veh    4     8     3     6     6     2     7     3    12    21     4     2
 Veh Stopping  %    86    99    78    48    99    43    89    92    98    87    99    45
 Do Veh Clear  ?   YES   YES   YES   YES   YES   YES   YES   YES   YES   YES   YES   YES
________________|_________________|________________|________________|_____________

     Whole Intersection - Weighted Av Delay (sec) =  37  Level of Service =  D-
     Critical Movements - Weighted Av Delay (sec) =  37  Level of Service =  D-
       ''        ''     - Intersection Capacity Utilization (ICU) =  0.89

    Predetermined Cycle Length is 180 seconds (Min. times may not be satisfied)

* CAPSSI (Release 11) - Based on Delay Methodology Per 1985 Highway Capacity Manual
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CAPSSI
COMPREHENSIVE ANALYSIS PROGRAM
FOR A SINGLE SIGNALIZED INTERSECTION *

[illegible]-16-97

PROJECT CONDITIONS
SOLUTION USING PREDETERMINED CYCLE TIMES

FLN:sanmoo

SAN TOMAS/MOORPARK A.M Peak Hour Scenario 3

Movement	EBT	EBL	EBR	SBT	SBL	SBR	WBT	WBL	WBR	NBT	NBL	NBR
Phase 1 - 22 secs	.	X	.	.	.	.	.	X	.	.	.	.
Phase 2 - 2 secs	.	.	.	.	.	.	X	X	X	.	.	.
Phase 3 - 34 secs	X	.	X	.	.	.	X	.	X	.	.	.
Phase 4 - 14 secs	.	.	X	.	X	.	.	.	.	.	X	.
Phase 5 - 3 secs	.	.	.	X	X	X	.	.	.	.	.	.
Phase 6 - 105 secs	.	.	.	X	.	X	.	.	.	X	.	X

	EBT	EBL	EBR	SBT	SBL	SBR	WBT	WBL	WBR	NBT	NBL	NBR
Critical Mvmt-**		****			****				****	****		
Peak 15 Vol -vph	172	174	69	560	128	79	326	73	296	2892	181	83
Saturation -vph	3800	1750	1750	3800	1750	1750	3800	1750	1750	5700	3150	1750
Lost time -sec	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Relative Sat 'X'	0.25	0.89	0.15	0.25	0.88	0.08	0.45	0.34	0.90	0.89	0.86	0.08
Effective Gr-sec	32	20	46	106	15	106	34	22	34	103	12	103
Move Time -sec	34	22	48	108	17	108	36	24	36	105	14	105
Min/Ped Time-sec	20	10	20	20	10	20	20	10	20	20	10	20
Prog Factor PAF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AvDelay/veh -sec	48	86	39	14	90	12	50	55	72	28	83	13
Level of Service	E	F	D-	B-	F	B-	E	E-	F	D+	F	B-
Av.'Q'/ lane veh	4	8	3	6	6	2	7	3	12	21	4	2
Veh Stopping %	86	99	78	48	99	43	89	92	98	87	99	45
Do Veh Clear ?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES

Whole Intersection - Weighted Av Delay (sec) = 37 Level of Service = D-
Critical Movements - Weighted Av Delay (sec) = 37 Level of Service = D-
'' '' - Intersection Capacity Utilization (ICU) = 0.89

Predetermined Cycle Length is 180 seconds (Min. times may not be satisfied)

* CAPSSI (Release 11) - Based on Delay Methodology Per 1985 Highway Capacity Manual

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                                 C A P S S I                              11-10-97
                         COMPREHENSIVE ANALYSIS PROGRAM
                      FOR A SINGLE SIGNALIZED INTERSECTION *


                             CUMULATIVE W/PROJECT
                      SOLUTION USING PREDETERMINED CYCLE TIMES
                                                                          FLN:SANMOO
   SAN TOMAS/MOORPARK                                      A.M Peak Hour  Scenario  5
 ______________________________________________________________________________________
                       |                  |                  |                  |
      Movement          EBT   EBL   EBR    SBT   SBL   SBR    WBT   WBL   WBR    NBT   NBL   NBR
 Phase 1 -   22 secs     .     X     .      .     .     .      .     X     .      .     .     .
 Phase 2 -    2 secs     .     .     .      .     .     .      X     X     X      .     .     .
 Phase 3 -   34 secs     X     .     X      .     .     .      X     .     X      .     .     .
 Phase 4 -   14 secs     .     .     X      .     X     .      .     .     .      .     X     .
 Phase 5 -    3 secs     .     .     .      X     X     X      .     .     .      .     .     .
 Phase 6 -  105 secs     .     .     .      X     .     X      .     .     .      X     .     X
 ______________________|__________________|__________________|__________________|______________
                       |                  |                  |                  |
  Critical Mvmt-**            ****               ****                      ****  ****
  Peak 15 Vol -vph      172   174    69    561   128    79    326    73   296   2894   181    83
  Saturation  -vph     3800  1750  1750   3800  1750  1750   3800  1750  1750   5700  3150  1750
  Lost time    -sec    2.00  2.00  2.00   2.00  2.00  2.00   2.00  2.00  2.00   2.00  2.00  2.00
  Relative Sat 'X'     0.25  0.89  0.15   0.25  0.88  0.08   0.45  0.34  0.90   0.89  0.86  0.08
  Effective Gr-sec       32    20    46    106    15   106     34    22    34    103    12   103
  Move Time    -sec      34    22    48    108    17   108     36    24    36    105    14   105
  Min/Ped Time-sec       20    10    20     20    10    20     20    10    20     20    10    20
  Prog Factor  PAF     1.00  1.00  1.00   1.00  1.00  1.00   1.00  1.00  1.00   1.00  1.00  1.00
  AvDelay/veh -sec       48    86    39     14    90    12     50    55    72     28    83    13
  Level of Service        E     F    D-     B-     F    B-      E    E-     F     D+     F    B-
  Av.'Q'/ lane veh        4     8     3      6     6     2      7     3    12     21     4     2
  Veh Stopping  %        86    99    78     48    99    43     89    92    98     87    99    45
  Do Veh Clear  ?       YES   YES   YES    YES   YES   YES    YES   YES   YES    YES   YES   YES
 ______________________|__________________|__________________|__________________|______________

         Whole Intersection - Weighted Av Delay (sec) =  37  Level of Service =  D-
         Critical Movements - Weighted Av Delay (sec) =  37  Level of Service =  D-
            ''        ''    - Intersection Capacity Utilization (ICU) =  0.89

         Predetermined Cycle Length is 180 seconds (Min. times may not be satisfied)

  * CAPSSI (Release 11) - Based on Delay Methodology Per 1985 Highway Capacity Manual
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                              C A P S S I                                10-16-97
                     COMPREHENSIVE ANALYSIS PROGRAM
                  FOR A SINGLE SIGNALIZED INTERSECTION *


                          EXISTING CONDITIONS
                  SOLUTION USING PREDETERMINED CYCLE TIMES
                                                                   FLN:sanmoo
SAN TOMAS/MOORPARK                                 P.M Peak Hour   Scenario  6
_______________________________________________________________________________
                     |                    |                    |                    |
    Movement          EBT   EBL   EBR   SBT   SBL   SBR   WBT   WBL   WBR   NBT   NBL   NBR
 Phase 1 -  16 secs    .     X     .     .     .     .     .     X     .     .     .     .
 Phase 2 -   3 secs    .     .     .     .     .     .     X     X     X     .     .     .
 Phase 3 -  25 secs    X     .     X     .     .     .     X     .     X     .     .     .
 Phase 4 -   9 secs    .     .     X     .     X     .     .     .     .     .     X     .
 Phase 5 -  30 secs    .     .     .     X     X     X     .     .     .     .     .     .
 Phase 6 -  97 secs    .     .     .     X     .     X     .     .     .     X     .     X
_____________________|____________________|____________________|____________________|__________
                     |                    |                    |                    |
  Critical Mvmt-**   ****              ****                    ****              ****
  Peak 15 Vol -vph   430   119   203  2352   309   187   315   143    95   978   112    86
  Saturation  -vph  3800  1750  1750  3800  1750  1750  3800  1750  1750  5700  3150  1750
  Lost time   -sec  2.00  2.00  2.00  2.00  2.00  2.00  2.00  2.00  2.00  2.00  2.00  2.00
  Relative Sat 'X'  0.89  0.87  0.65  0.89  0.86  0.15  0.57  0.87  0.38  0.29  0.91  0.09
  Effective Gr-sec    23    14    32   125    37   125    26    17    26    95     7    95
  Move Time   -sec    25    16    34   127    39   127    28    19    28    97     9    97
  Min/Ped Time-sec    20    10    20    20    10    20    20    10    20    20    10    20
  Prog Factor  PAF  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
  AvDelay/veh -sec    71    91    56    20    65     7    56    85    53    18   105    16
  Level of Service     F     F    E-    C+     F    B+    E-     F     E    C+     F    C+
  Av.'Q'/ lane veh     9     6     8    18    12     3     7     7     4     7     3     2
  Veh Stopping  %     98    99    93    80    96    34    93    99    90    56   100    50
  Do Veh Clear  ?    YES   YES   YES   YES   YES   YES   YES   YES   YES   YES   YES   YES
_____________________|____________________|____________________|____________________|__________

      Whole Intersection - Weighted Av Delay (sec) =  35  Level of Service =  D-
      Critical Movements - Weighted Av Delay (sec) =  33  Level of Service =  D
        ''        ''     - Intersection Capacity Utilization (ICU) =  0.89

     Predetermined Cycle Length is 180 seconds (Min. times may not be satisfied)

 * CAPSSI (Release 11) - Based on Delay Methodology Per 1985 Highway Capacity Manual
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97-036

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                     C A P S S I                              10-16-97
             COMPREHENSIVE ANALYSIS PROGRAM
          FOR A SINGLE SIGNALIZED INTERSECTION *


                  BACKGROUND CONDITIONS
           SOLUTION USING PREDETERMINED CYCLE TIMES
                                                              FLN:sanmoo
SAN TOMAS/MOORPARK                            P.M Peak Hour   Scenario  7
---------------------------------------------------------------------------
                      |                   |                   |                   |
   Movement         EBT    EBL    EBR    SBT    SBL    SBR    WBT    WBL    WBR    NBT    NBL    NBR
 Phase 1 -  16 secs   .      X      .      .      .      .      .      X      .      .      .      .
 Phase 2 -   3 secs   .      .      .      .      .      .      X      X      X      .      .      .
 Phase 3 -  25 secs   X      .      X      .      .      .      X      .      X      .      .      .
 Phase 4 -   9 secs   .      .      X      .      X      .      .      .      .      .      X      .
 Phase 5 -  30 secs   .      .      .      X      X      X      .      .      .      .      .      .
 Phase 6 -  97 secs   .      .      .      X      .      X      .      .      .      X      .      X
 _____________________|___________________|___________________|___________________|_________________
                      |                   |                   |                   |
  Critical Mvmt-**  ****                 ****                        ****                 ****
  Peak 15 Vol -vpn   443    123    209   2423    318    193    324    147     98    904    115     89
  Saturation  -vph  3800   1750   1750   3800   1750   1750   3800   1750   1750   5700   3150   1750
  Lost time   -sec  2.00   2.00   2.00   2.00   2.00   2.00   2.00   2.00   2.00   2.00   2.00   2.00
  Relative Sat 'X'  0.91   0.90   0.67   0.92   0.88   0.16   0.59   0.89   0.39   0.30   0.94   0.10
  Effective Gr-sec    23     14     32    125     37    125     26     17     26     95      7     95
  Move Time   -sec    25     16     34    127     39    127     28     19     28     97      9     97
  Min/Ped Time-sec    20     10     20     20     10     20     20     10     20     20     10     20
  Prog Factor  PAF  1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00
  AvDelay/veh -sec    74     97     56     22     68      7     56     89     54     18    110     16
  Level of Service     F      F     E-     C-      F     B+     E-      F      E     C+      F     C+
  Av.'Q'/ lane veh    10      6      9     19     13      3      7      7      4      7      3      2
  Veh Stopping  %     99     99     93     84     97     34     94     99     91     56    100     50
  Do Veh Clear  ?    YES    YES    YES    YES    YES    YES    YES    YES    YES    YES    YES    YES
 _____________________|___________________|___________________|___________________|_________________

       Whole Intersection - Weighted Av Delay (sec) =  37  Level of Service =  D-
       Critical Movements - Weighted Av Delay (sec) =  36  Level of Service =  D-
         ''        ''     - Intersection Capacity Utilization (ICU) =  0.92

     Predetermined Cycle Length is 180 seconds (Min. times may not be satisfied)

 * CAPSSI (Release 11) - Based on Delay Methodology Per 1985 Highway Capacity Manual
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97-036

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                              C A P S S I                              [illegible]-16-97
                     COMPREHENSIVE ANALYSIS PROGRAM
                   FOR A SINGLE SIGNALIZED INTERSECTION *


                          PROJECT CONDITIONS
                   SOLUTION USING PREDETERMINED CYCLE TIMES
                                                                        FLN:sanmoo
SAN TOMAS/MOORPARK                                   P.M Peak Hour      Scenario  8
_______________________________________________________________________________________
                      |                     |                     |                     |
   Movement           EBT    EBL    EBR    SBT    SBL    SBR    WBT    WBL    WBR    NST    NBL    NBR
 Phase 1 -  16 secs    .      X      .      .      .      .      .      X      .      .      .      .
 Phase 2 -   3 secs    .      .      .      .      .      .      X      X      X      .      .      .
 Phase 3 -  25 secs    X      .      X      .      .      .      X      .      X      .      .      .
 Phase 4 -   9 secs    .      .      X      .      X      .      .      .      .      .      X      .
 Phase 5 -  30 secs    .      .      .      X      X      X      .      .      .      .      .      .
 Phase 6 -  97 secs    .      .      .      X      .      X      .      .      .      X      .      X
______________________|_____________________|_____________________|_____________________|______________
                      |                     |                     |                     |
  Critical Mvmt-**    ****                 ****                        ****                 ****
  Peak 15 Vol -vph    443    123    209   2423    318    193    324    154     98    904    115     96
  Saturation  -vph   3800   1750   1750   3800   1750   1750   3800   1750   1750   5700   3150   1750
  Lost time   -sec   2.00   2.00   2.00   2.00   2.00   2.00   2.00   2.00   2.00   2.00   2.00   2.00
  Relative Sat 'X'   0.91   0.90   0.67   0.92   0.88   0.16   0.59   0.93   0.39   0.30   0.94   0.10
  Effective Gr-sec     23     14     32    125     37    125     26     17     26     95      7     95
  Move Time   -sec     25     16     34    127     39    127     28     19     28     97      9     97
  Min/Ped Time-sec     20     10     20     20     10     20     20     10     20     20     10     20
  Prog Factor  PAF   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00
  AvDelay/veh -sec     74     97     56     22     68      7     56     98     54     18    110     16
  Level of Service      F      F     E-     C-      F     B+     E-      F      E     C+      F     C+
  Av.'Q'/ lane veh     10      6      9     19     13      3      7      7      4      7      3      2
  Veh Stopping  %      99     99     93     84     97     34     94     99     91     56    100     50
  Do Veh Clear  ?     YES    YES    YES    YES    YES    YES    YES    YES    YES    YES    YES    YES
______________________|_____________________|_____________________|_____________________|______________

     Whole Intersection - Weighted Av Delay (sec) =  37  Level of Service =  D-
     Critical Movements - Weighted Av Delay (sec) =  36  Level of Service =  D-
        ''       ''     - Intersection Capacity Utilization (ICU) =  0.92

    Predetermined Cycle Length is 180 seconds (Min. times may not be satisfied)

 * CAPSSI (Release 11) - Based on Delay Methodology Per 1985 Highway Capacity Manual
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                          C A P S S I                          11-10-97
                 COMPREHENSIVE ANALYSIS PROGRAM
              FOR A SINGLE SIGNALIZED INTERSECTION *

                      CUMULATIVE W/PROJECT
               SOLUTION USING PREDETERMINED CYCLE TIMES
                                                               FLN:SANMOO
SAN TOMAS/MOORPARK                             P.M Peak Hour   Scenario 10

______________________________________________________________________________
                     |                  |                  |                  |
  Movement           EBT   EBL   EBR   SBT   SBL   SBR   WBT   WBL   WBR   NST   NBL   NBR
Phase 1 -  16 secs    .     X     .     .     .     .     .     X     .     .     .     .
Phase 2 -   3 secs    .     .     .     .     .     .     X     X     X     .     .     .
Phase 3 -  25 secs    X     .     X     .     .     .     X     .     X     .     .     .
Phase 4 -   9 secs    .     .     X     .     X     .     .     .     .     .     X     .
Phase 5 -  30 secs    .     .     .     X     X     X     .     .     .     .     .     .
Phase 6 -  97 secs    .     .     .     X     .     X     .     .     .     X     .     X
_____________________|__________________|__________________|__________________|__________________
                     |                  |                  |                  |
 Critical Mvmt-**    ****              ****                    ****              ****
 Peak 15 Vol -vph    443   123   209  2431   318   193   324   154    98   912   115    96
 Saturation  -vph   3800  1750  1750  3800  1750  1750  3800  1750  1750  5700  3150  1750
 Lost time    -sec  2.00  2.00  2.00  2.00  2.00  2.00  2.00  2.00  2.00  2.00  2.00  2.00
 Relative Sat 'X'   0.91  0.90  0.67  0.92  0.88  0.16  0.59  0.93  0.39  0.30  0.94  0.10
 Effective Gr-sec     23    14    32   125    37   125    26    17    26    95     7    95
 Move Time    -sec    25    16    34   127    39   127    28    19    28    97     9    97
 Min/Ped Time-sec     20    10    20    20    10    20    20    10    20    20    10    20
 Prog Factor  PAF   1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 AvDelay/veh -sec     74    97    56    22    68     7    56    98    54    18   110    16
 Level of Service      F     F    E-    C-     F    B+    E-     F     E    C+     F    C+
 Av.'Q'/ lane veh     10     6     9    19    13     3     7     7     4     7     3     2
 Veh Stopping  %      99    99    93    85    97    34    94    99    91    56   100    50
 Do Veh Clear  ?     YES   YES   YES   YES   YES   YES   YES   YES   YES   YES   YES   YES
_____________________|__________________|__________________|__________________|__________________

        Whole Intersection - Weighted Av Delay (sec) =  37  Level of Service =  D-
        Critical Movements - Weighted Av Delay (sec) =  36  Level of Service =  D-
           ''        ''    - Intersection Capacity Utilization (ICU) =  0.92

        Predetermined Cycle Length is 180 seconds (Min. times may not be satisfied)

* CAPSSI (Release 11) - Based on Delay Methodology Per 1985 Highway Capacity Manual
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97-036

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                        C A P S S I                              10-16-97
              COMPREHENSIVE ANALYSIS PROGRAM
            FOR A SINGLE SIGNALIZED INTERSECTION *


                     EXISTING CONDITIONS
             SOLUTION USING PREDETERMINED CYCLE TIMES
                                                                FLN:sarste
SARATOGA/STEVENS CREEK                          A.M Peak Hour     Scenario 1
_____________________________________________________________________________
                     |                    |                    |
   Movement         EBT   EBL   EBR   SBT   SBL   SBR   WBT   WBL   WBR   NBT   NBL   NBR
Phase 1 -   16 secs   .     X     .     .     .     .     .     X     .     .     .     .
Phase 2 -    8 secs   .     .     .     .     .     .     X     X     .     .     .     .
Phase 3 -   41 secs   X     .     X     .     .     .     X     .     X     .     .     .
Phase 4 -   14 secs   .     .     X     .     X     .     .     .     .     .     X     .
Phase 5 -   34 secs   .     .     .     .     .     .     .     .     .     X     X     X
Phase 6 -   44 secs   .     .     .     X     .     X     .     .     .     X     .     X
_____________________|__________________|__________________|__________________|__________________
                     |                  |                  |                  |
 Critical Mvmt-**         ****                ****        ****              ****
 Peak 15 Vol -vph   313    92    88   397    61    85   782   121    41   920   240   155
 Saturation  -vph  5700  1750  1750  3800  1750  1750  5700  1750  1750  3800  1750  1750
 Lost time   -sec  2.00  2.00  2.00  2.00  2.00  2.00  2.00  2.00  2.00  2.00  2.00  2.00
 Relative Sat 'X'  0.22  0.59  0.15  0.39  0.46  0.18  0.46  0.49  0.08  0.50  0.47  0.18
 Effective Gr-sec    39    14    53    42    12    42    47    22    47    76    46    76
 Move Time   -sec    41    16    55    44    14    44    49    24    49    78    48    78
 Min/Ped Time-sec    31    10    31    34    10    34    31    10    31    34    10    34
 Prog Factor  PAF  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 AvDelay/veh -sec    36    56    28    36    54    34    34    49    30    21    35    17
 Level of Service    D-    E-    D+    D-    E     D     D     E     D+    C-    D-    C+
 Av.'Q'/ lane veh     3     4     3     6     2     3     8     5     1    10     7     3
 Veh Stopping  %     80    96    70    82    96    77    81    92    72    68    82    57
 Do Veh Clear  ?    YES   YES   YES   YES   YES   YES   YES   YES   YES   YES   YES   YES
_____________________|__________________|__________________|__________________|__________________

        Whole Intersection - Weighted Av Delay (sec) =  31  Level of Service =  D
        Critical Movements - Weighted Av Delay (sec) =  29  Level of Service =  D+
           ''         ''   - Intersection Capacity Utilization (ICU) =  0.49

      Predetermined Cycle Length is 157 seconds (All Minimum times are satisfied)

 * CAPSSI (Release 11) - Based on Delay Methodology Per 1985 Highway Capacity Manual
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97-036

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                              C A P S S I                              10-16-97
                      COMPREHENSIVE ANALYSIS PROGRAM
                   FOR A SINGLE SIGNALIZED INTERSECTION *


                          BACKGROUND CONDITIONS
                  SOLUTION USING PREDETERMINED CYCLE TIMES
                                                                       FLN:sarste
 SARATOGA/STEVENS CREEK                          A.M Peak Hour         Scenario  2
______________________________________________________________________________
                    |                   |                   |                  |
    Movement         EBT   EBL   EBR   SBT   SBL   SBR   WBT   WBL   WBR   NBT   NBL   NBR
  Phase 1 -  16 secs   .     X     .     .     .     .     .     X     .     .     .     .
  Phase 2 -   7 secs   .     .     .     .     .     .     X     X     X     .     .     .
  Phase 3 -  42 secs   X     .     X     .     .     .     X     .     X     .     .     .
  Phase 4 -  14 secs   .     .     X     .     X     .     .     .     .     .     X     .
  Phase 5 -  34 secs   .     .     .     .     .     .     .     .     .     X     X     X
  Phase 6 -  44 secs   .     .     .     X     .     X     .     .     .     X     .     X
____________________|___________________|___________________|__________________|___________
                    |                   |                   |                  |
   Critical Mvmt-**       ****              ****        ****              ****
   Peak 15 Vol -vph   333    99    92   415    64    90   820   126    43   961   251   162
   Saturation  -vph  5700  1750  1750  3800  1750  1750  5700  1750  1750  3800  1750  1750
   Lost time   -sec  2.00  2.00  2.00  2.00  2.00  2.00  2.00  2.00  2.00  2.00  2.00  2.00
   Relative Sat 'X'  0.23  0.63  0.15  0.41  0.48  0.19  0.48  0.54  0.08  0.52  0.49  0.19
   Effective Gr-sec    40    14    54    42    12    42    47    21    47    76    46    76
   Move Time   -sec    42    16    56    44    14    44    49    23    49    78    48    78
   Min/Ped Time-sec    31    10    31    34    10    34    31    10    31    34    10    34
   Prog Factor  PAF  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
   AvDelay/veh -sec    35    58    27    36    55    34    34    50    30    21    35    18
   Level of Service    D-    E-    D+    D-    E     D     D     E     D     C-    D-    C+
   Av.'Q'/ lane veh     4     4     3     7     3     3     8     5     1    11     8     4
   Veh Stopping  %     79    97    69    82    96    77    82    93    72    69    83    57
   Do Veh Clear  ?    YES   YES   YES   YES   YES   YES   YES   YES   YES   YES   YES   YES
____________________|___________________|___________________|__________________|___________

          Whole Intersection - Weighted Av Delay (sec) =  32  Level of Service =  D
          Critical Movements - Weighted Av Delay (sec) =  30  Level of Service =  D+
              ''       ''    - Intersection Capacity Utilization (ICU) =  0.52

          Predetermined Cycle Length is 157 seconds (All Minimum times are satisfied)

 * CAPSSI (Release 11) - Based on Delay Methodology Per 1985 Highway Capacity Manual
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                        C A P S S I                            [illegible]-97
                COMPREHENSIVE ANALYSIS PROGRAM
            FOR A SINGLE SIGNALIZED INTERSECTION *


                     PROJECT CONDITIONS
             SOLUTION USING PREDETERMINED CYCLE TIMES
                                                                 FN:sarste
 SARATOGA/STEVENS CREEK                          A.M Peak Hour   Scenario  3
 ___________________________________________________________________________
                     |                  |                  |
   Movement           EBT   EBL   EBR  | SBT   SBL   SBR  | WBT   WBL   WBR  | NBT   NBL   NBR
 Phase 1 -  16 secs    .     X     .     .     .     .      .     X     .     .     .     .
 Phase 2 -   7 secs    .     .     .     .     .     .      X     X     X     .     .     .
 Phase 3 -  42 secs    X     .     X     .     .     .      X     .     X     .     .     .
 Phase 4 -  14 secs    .     .     X     .     X     .      .     .     .     .     X     .
 Phase 5 -  34 secs    .     .     .     .     .     .      .     .     .     X     X     X
 Phase 6 -  44 secs    .     .     .     X     .     X      .     .     .     X     .     X
 ____________________|__________________|__________________|__________________|_________________
                     |                  |                  |
  Critical Mvmt-**          ****              ****         ****                ****
  Peak 15 Vol -vph    347    99    92   415    64    90    844   126    43   961   251   162
  Saturation  -vph   5700  1750  1750  3800  1750  1750   5700  1750  1750  3800  1750  1750
  Lost time   -sec   2.00  2.00  2.00  2.00  2.00  2.00   2.00  2.00  2.00  2.00  2.00  2.00
  Relative Sat 'X'   0.24  0.63  0.15  0.41  0.45  0.19   0.49  0.54  0.08  0.52  0.49  0.19
  Effective Gr-sec     40    14    54    42    12    42     47    21    47    76    46    76
  Move Time   -sec     42    16    56    44    14    44     49    23    49    78    48    78
  Min/Ped Time-sec     31    10    31    34    10    34     31    10    31    34    10    34
  Prog Factor  PAF   1.00  1.00  1.00  1.00  1.00  1.00   1.00  1.00  1.00  1.00  1.00  1.00
  AvDelay/veh -sec     35    58    27    36    55    34     35    50    30    21    35    18
  Level of Service     D-    E-    D+    D-    E     D      D     E     D     C-    D-    C+
  Av.'Q'/ lane veh      4     4     3     7     3     3      9     5     1    11     8     4
  Veh Stopping  %      79    97    69    82    96    77     82    93    72    69    83    57
  Do Veh Clear  ?     YES   YES   YES   YES   YES   YES    YES   YES   YES   YES   YES   YES
 ____________________|__________________|__________________|__________________|_________________

      Whole Intersection - Weighted Av Delay (sec) =  32  Level of Service =  D
      Critical Movements - Weighted Av Delay (sec) =  30  Level of Service =  D
        ''        ''     - Intersection Capacity Utilization (ICU) =  0.52

     Predetermined Cycle Length is 157 seconds (All Minimum times are satisfied)

 * CAPSSI (Release 11) - Based on Delay Methodology Per 1985 Highway Capacity Manual
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                              C A P S S I                          11-10-97
                     COMPREHENSIVE ANALYSIS PROGRAM
                  FOR A SINGLE SIGNALIZED INTERSECTION *

                          CUMULATIVE W/PROJECT
                  SOLUTION USING PREDETERMINED CYCLE TIMES
                                                                  FLN:SARSTE
 SARATOGA/STEVENS CREEK                             A.M Peak Hour  Scenario  5
 ______________________________________________________________________________
                       |                 |                 |                 |
    Movement          EBT   EBL   EBR   SBT   SBL   SBR   WBT   WBL   WBR   NBT   NBL   NBR
 Phase 1 -   16 secs   .     X     .     .     .     .     .     X     .     .     .     .
 Phase 2 -    7 secs   .     .     .     .     .     .     X     X     X     .     .     .
 Phase 3 -   42 secs   X     .     X     .     .     .     X     .     X     .     .     .
 Phase 4 -   14 secs   .     .     X     .     X     .     .     .     .     .     X     .
 Phase 5 -   34 secs   .     .     .     .     .     .     .     .     .     X     X     X
 Phase 6 -   44 secs   .     .     .     X     .     X     .     .     .     X     .     X
 ______________________|_________________|_________________|_________________|__________
                       |                 |                 |                 |
  Critical Mvmt-**           ****              ****        ****              ****
  Peak 15 Vol -vph    350    99    92   415    64    90   846   126    43   961   251   162
  Saturation  -vph   5700  1750  1750  3800  1750  1750  5700  1750  1750  3800  1750  1750
  Lost time   -sec   2.00  2.00  2.00  2.00  2.00  2.00  2.00  2.00  2.00  2.00  2.00  2.00
  Relative Sat 'X'   0.24  0.63  0.15  0.41  0.48  0.19  0.50  0.54  0.08  0.52  0.49  0.19
  Effective Gr-sec     40    14    54    42    12    42    47    21    47    76    46    76
  Move Time   -sec     42    16    56    44    14    44    49    23    49    78    48    78
  Min/Ped Time-sec     31    10    31    34    10    34    31    10    31    34    10    34
  Prog Factor  PAF   1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
  AvDelay/veh -sec     35    58    27    36    55    34    35    50    30    21    35    18
  Level of Service     D-    E-    D+    D-    E     D     D     E     D     C-    D-    C+
  Av.'Q'/ lane veh      4     4     3     7     3     3     9     5     1    11     8     4
  Veh Stopping  %      79    97    69    82    96    77    82    93    72    69    83    57
  Do Veh Clear  ?     YES   YES   YES   YES   YES   YES   YES   YES   YES   YES   YES   YES
 ______________________|_________________|_________________|_________________|__________

     Whole Intersection - Weighted Av Delay (sec) =  32  Level of Service =  D
     Critical Movements - Weighted Av Delay (sec) =  30  Level of Service =  D
        ''        ''    - Intersection Capacity Utilization (ICU) =  0.52

    Predetermined Cycle Length is 157 seconds (All Minimum times are satisfied)

 * CAPSSI (Release 11) - Based on Delay Methodology Per 1985 Highway Capacity Manual
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                    C A P S S I                                  10-16-97
            COMPREHENSIVE ANALYSIS PROGRAM
          FOR A SINGLE SIGNALIZED INTERSECTION *


                  EXISTING CONDITIONS
           SOLUTION USING PREDETERMINED CYCLE TIMES
                                                                 FLN:sarste
SARATOGA/STEVENS CREEK                          P.M Peak Hour    Scenario  6
_______________________________________________________________________________
                  |                   |                   |                   |
  Movement        | EBT   EBL   EBR   | SBT   SBL   SBR   | WBT   WBL   WBR   | NBT   NBL   NBR
Phase 1 -  19 secs   .     X     .       .     .     .       .     X     .       .     .     .
Phase 2 -   7 secs   .     .     .       .     .     .       X     X     X       .     .     .
Phase 3 -  47 secs   X     .     X       .     .     .       X     .     X       .     .     .
Phase 4 -  19 secs   .     .     X       .     X     .       .     .     .       .     X     .
Phase 5 -  11 secs   .     .     .       .     .     .       .     .     .       X     X     X
Phase 6 -  54 secs   .     .     .       X     .     X       .     .     .       X     .     X
__________________|___________________|___________________|___________________|________________
                  |                   |                   |                   |
 Critical Mvmt-**   ****                ****                      ****                ****
 Peak 15 Vol -vph   1000   140   209    851   141   148    727   203    51    667   238   260
 Saturation  -vph   5700  1750  1750   3800  1750  1750   5700  1750  1750   3800  1750  1750
 Lost time   -sec   2.00  2.00  2.00   2.00  2.00  2.00   2.00  2.00  2.00   2.00  2.00  2.00
 Relative Sat 'X'   0.61  0.74  0.29   0.68  0.74  0.26   0.39  0.76  0.09   [illegible]  0.76  0.37
 Effective Gr-sec     45    17    64     52    17    52     52    24    52     63    28    63
 Move Time   -sec     47    19    66     54    19    54     54    26    54     65    30    65
 Min/Ped Time-sec     31    10    31     34    10    34     31    10    31     34    10    34
 Prog Factor  PAF   1.00  1.00  1.00   1.00  1.00  1.00   1.00  1.00  1.00   1.00  1.00  1.00
 AvDelay/veh -sec     37    61    24     35    61    29     31    56    27     26    54    25
 Level of Service     D-     F    C-     D-     F    D+      D    E-    D+     D+     E    D+
 Av.'Q'/ lane veh     10     5     5     12     5     4      7     7     1      9     9     7
 Veh Stopping  %      87    97    67     86    97    73     77    96    69     73    95    70
 Do Veh Clear  ?     YES   YES   YES    YES   YES   YES    YES   YES   YES    YES   YES   YES
__________________|___________________|___________________|___________________|________________

    Whole Intersection - Weighted Av Delay (sec) =  36  Level of Service =  D-
    Critical Movements - Weighted Av Delay (sec) =  40  Level of Service =  E+
      ''        ''     - Intersection Capacity Utilization (ICU) =  0.69

    Predetermined Cycle Length is 157 seconds (All Minimum times are satisfied)

* CAPSSI (Release 11) - Based on Delay Methodology Per 1985 Highway Capacity Manual
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                          C A P S S I                                12-16-97
                  COMPREHENSIVE ANALYSIS PROGRAM
                FOR A SINGLE SIGNALIZED INTERSECTION *


                       BACKGROUND CONDITIONS
                 SOLUTION USING PREDETERMINED CYCLE TIMES
                                                                    FLN:sarste
 SARATOGA/STEVENS CREEK                            P.M Peak Hour    Scenario  7
 ______________________________________________________________________________
                    |                    |                   |                 |
  Movement          EBT   EBL   EBR   SBT   SBL   SBR   WBT   WSL   WBR   NBT   NBL   NBR
 Phase 1 -  19 secs  .     X     .     .     .     .     .     X     .     .     .     .
 Phase 2 -   7 secs  .     .     .     .     .     .     X     X     X     .     .     .
 Phase 3 -  47 secs  X     .     X     .     .     .     X     .     X     .     .     .
 Phase 4 -  19 secs  .     .     X     .     X     .     .     .     .     .     X     .
 Phase 5 -  11 secs  .     .     .     .     .     .     .     .     .     X     X     X
 Phase 6 -  54 secs  .     .     .     X     .     X     .     .     .     X     .     X
 ___________________|___________________|___________________|___________________|________
                    |                   |                   |                   |
  Critical Mvmt-**  ****                ****                      ****              ****
  Peak 15 Vol -vph  1033   145   215   877   145   155   755   209    53   687   245   268
  Saturation  -vph  5700  1750  1750  3800  1750  1750  5700  1750  1750  3800  1750  1750
  Lost time   -sec  2.00  2.00  2.00  2.00  2.00  2.00  2.00  2.00  2.00  2.00  2.00  2.00
  Relative Sat 'X'  0.63  0.77  0.30  0.70  0.77  0.27  0.40  0.78  0.09  0.45  0.79  0.38
  Effective Gr-sec    45    17    64    52    17    52    52    24    52    63    28    63
  Move Time   -sec    47    19    66    54    19    54    54    26    54    65    30    65
  Min/Ped Time-sec    31    10    31    34    10    34    31    10    31    34    10    34
  Prog Factor  PAF  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
  AvDelay/veh -sec    38    63    24    36    63    29    31    58    28    26    55    25
  Level of Service    D-    F     C-    D-    F     D+    D     E-    D+    D+    E-    D+
  Av.'Q'/ lane veh    11     6     6    13     6     5     7     8     2     9     9     7
  Veh Stopping  %     87    97    68    87    97    73    77    96    69    73    96    71
  Do Veh Clear  ?    YES   YES   YES   YES   YES   YES   YES   YES   YES   YES   YES   YES
 ___________________|___________________|___________________|___________________|________

         Whole Intersection - Weighted Av Delay (sec) =  36  Level of Service =  D-
         Critical Movements - Weighted Av Delay (sec) =  41  Level of Service =  E+
              ''       ''   - Intersection Capacity Utilization (ICU) =  0.71

        Predetermined Cycle Length is 157 seconds (All Minimum times are satisfied)

 * CAPSSI (Release 11) - Based on Delay Methodology Per 1985 Highway Capacity Manual
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                          CAPSSI                              [illegible]-16-97
              COMPREHENSIVE ANALYSIS PROGRAM
             FOR A SINGLE SIGNALIZED INTERSECTION *


                      PROJECT CONDITIONS
             SOLUTION USING PREDETERMINED CYCLE TIMES
                                                                   FLN:sarste
SARATOGA/STEVENS CREEK                          P.M Peak Hour      Scenario  8
___________________________________________________________________________________
                      |                   |                 |
     Movement        EBT   EBL   EBR   SBT   SBL   SBR   WBT   WBL   WBR   NBT   NBL   NBR
Phase 1 -  19 secs    .     X     .     .     .     .     .     X     .     .     .     .
Phase 2 -   7 secs    .     .     .     .     .     .     X     X     X     .     .     .
Phase 3 -  47 secs    X     .     X     .     .     .     X     .     X     .     .     .
Phase 4 -  19 secs    .     .     X     .     X     .     .     .     .     .     X     .
Phase 5 -  11 secs    .     .     .     .     .     .     .     .     .     X     X     X
Phase 6 -  54 secs    .     .     .     X     .     X     .     .     .     X     .     X
______________________|___________________|_________________|_________________|____________
                      |                   |                 |                 |
 Critical Mvmt-**    ****              ****                    ****              ****
 Peak 15 Vol -vph    1068   145   215   877   145   155   732   239    53   687   245   268
 Saturation  -vph    5700  1750  1750  3800  1750  1750  5700  1750  1750  3800  1750  1750
 Lost time   -sec    2.00  2.00  2.00  2.00  2.00  2.00  2.00  2.00  2.00  2.00  2.00  2.00
 Relative Sat 'X'    0.65  0.77  0.30  0.70  0.77  0.27  0.41  0.73  0.09  0.45  0.79  0.38
 Effective Gr-sec     45    17    64    52    17    52    52    24    52    63    28    63
 Move Time   -sec     47    19    66    54    19    54    54    26    54    65    30    65
 Min/Ped Time-sec     31    10    31    34    10    34    31    10    31    34    10    34
 Prog Factor  PAF    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 AvDelay/veh -sec     38    63    24    36    63    29    31    58    28    26    55    25
 Level of Service     D-    F     C-    D-    F     D+    D     E-    D+    D+    E-    D+
 Av.'Q'/ lane veh     11     6     6    13     6     5     8     8     2     9     9     7
 Veh Stopping  %      88    97    68    87    97    73    78    96    69    73    96    71
 Do Veh Clear  ?     YES   YES   YES   YES   YES   YES   YES   YES   YES   YES   YES   YES
_____________________|___________________|_________________|_________________|____________

      Whole Intersection - Weighted Av Delay (sec) =  36  Level of Service =  D-
      Critical Movements - Weighted Av Delay (sec) =  41  Level of Service =  E+
        ''         ''    - Intersection Capacity Utilization (ICU) =  0.71

     Predetermined Cycle Length is 157 seconds (All Minimum times are satisfied)

* CAPSSI (Release 11) - Based on Delay Methodology Per 1985 Highway Capacity Manual
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97-036

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                              C A P S S I                              11-10-97
                     COMPREHENSIVE ANALYSIS PROGRAM
                  FOR A SINGLE SIGNALIZED INTERSECTION *

                          CUMULATIVE W/PROJECT
                  SOLUTION USING PREDETERMINED CYCLE TIMES
                                                                     FLN:SARSTE
SARATOGA/STEVENS CREEK                                 P.M Peak Hour Scenario 10
______________________________________________________________________________
                     |                  |                 |                 |
     Movement        |  EBT   EBL   EBR |  SBT   SBL  SBR |  WBT  WBL   WBR |  NBT   NBL   NBR
Phase 1 -  19 secs   |   .     X     .  |   .     .    .  |   .    X     .  |   .     .     .
Phase 2 -   7 secs   |   .     .     .  |   .     .    .  |   X    X     X  |   .     .     .
Phase 3 -  47 secs   |   X     .     X  |   .     .    .  |   X    .     X  |   .     .     .
Phase 4 -  19 secs   |   .     .     X  |   .     X    .  |   .    .     .  |   .     X     .
Phase 5 -  11 secs   |   .     .     .  |   .     .    .  |   .    .     .  |   X     X     X
Phase 6 -  54 secs   |   .     .     .  |   X     .    X  |   .    .     .  |   X     .     X
_____________________|__________________|_________________|_________________|_________________
                     |                  |                 |                 |
 Critical Mvmt-**    | ****             | ****            |      ****       |       ****
 Peak 15 Vol -vph    | 1081   145   215 |  877  145  155  |  795  209   53  |  687   245   268
 Saturation  -vph    | 5700  1750  1750 | 3800 1750 1750  | 5700 1750 1750  | 3800  1750  1750
 Lost time   -sec    | 2.00  2.00  2.00 | 2.00 2.00 2.00  | 2.00 2.00 2.00  | 2.00  2.00  2.00
 Relative Sat 'X'    | 0.66  0.77  0.30 | 0.70 0.77 0.27  | 0.42 0.78 0.09  | 0.45  0.79  0.38
 Effective Gr-sec    |   45    17    64 |   52   17   52  |   52   24   52  |   63    28    63
 Move Time   -sec    |   47    19    66 |   54   19   54  |   54   26   54  |   65    30    65
 Min/Ped Time-sec    |   31    10    31 |   34   10   34  |   31   10   31  |   34    10    34
 Prog Factor  PAF    | 1.00  1.00  1.00 | 1.00 1.00 1.00  | 1.00 1.00 1.00  | 1.00  1.00  1.00
 AvDelay/veh -sec    |   38    63    24 |   36   63   29  |   31   58   28  |   26    55    25
 Level of Service    |   D-    F     C- |   D-   F    D+  |   D    E-   D+  |   D+    E-    D+
 Av.'Q'/ lane veh    |   11     6     6 |   13    6    5  |    8    8    2  |    9     9     7
 Veh Stopping  %     |   88    97    68 |   87   97   73  |   78   96   69  |   73    96    71
 Do Veh Clear  ?     |  YES   YES   YES |  YES  YES  YES  |  YES  YES  YES  |  YES   YES   YES
_____________________|__________________|_________________|_________________|_________________

       Whole Intersection - Weighted Av Delay (sec) =  36  Level of Service =  D-
       Critical Movements - Weighted Av Delay (sec) =  41  Level of Service =  E+
         ''        ''     - Intersection Capacity Utilization (ICU) =  0.72

      Predetermined Cycle Length is 157 seconds (All Minimum times are satisfied)

 * CAPSSI (Release 11) - Based on Delay Methodology Per 1985 Highway Capacity Manual
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97-036

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                          C A P S S I                               10-16-97
                COMPREHENSIVE ANALYSIS PROGRAM
              FOR A SINGLE SIGNALIZED INTERSECTION *

                       EXISTING CONDITIONS
              SOLUTION USING PREDETERMINED CYCLE TIMES
                                                                 FLN:stewin
STEVENS CREEK/WINCHESTER                          A.M Peak Hour  Scenario  1
______________________________________________________________________________
                  |                     |                    |
  Movement          EBT   EBL   EBR   SBT   SBL   SBR   WBT   WBL   WBR   NBT   NBL   NBR
Phase 1 -  11 secs   .     X     .     .     .     .     .     X     .     .     .     .
Phase 2 -  12 secs   .     .     .     .     .     .     X     X     X     .     .     .
Phase 3 -  35 secs   X     .     X     .     .     .     X     .     X     .     .     .
Phase 4 -  17 secs   .     .     .     .     X     .     .     .     X     .     X     .
Phase 5 -   6 secs   .     .     .     .     .     .     .     .     .     X     X     X
Phase 6 -  54 secs   .     .     .     X     .     X     .     .     .     X     .     X
__________________|_____________________|____________________|__________________
                  |                     |                    |
 Critical Mvmt-**   ****                     ****                 ****        ****
 Peak 15 Vol -vph   474   145   136   241   117    87   787   324   247  1071   151   260
 Saturation  -vph  5700  3150  1750  5700  1750  Shrd  5700  3150  1750  3800  1750  1750
 Lost time   -sec  2.00  2.00  2.00  2.00  2.00    -   2.00  2.00  2.00  2.00  2.00  2.00
 Relative Sat 'X'  0.34  0.69  0.32  0.15  0.60    -   0.41  0.66  0.31  0.66  0.55  0.35
 Effective Gr-sec    33     9    33    52    15    -     45    21    62    58    21    58
 Move Time   -sec    35    11    35    54    17    -     47    23    64    60    23    60
 Min/Ped Time-sec    25    10    25    30    10    -     27    10    27    30    10    30
 Prog Factor  PAF  1.00  1.00  1.00  1.00  1.00    -   1.00  1.00  1.00  1.00  1.00  1.00
 AvDelay/veh -sec    32    53    32    21    47    -     27    43    18    24    42    20
 Level of Service     D     E     D    C-     E    -     D+    E+    C+    C-    E+    C+
 Av.'Q'/ lane veh     4     3     4     3     4    -      7     5     5    11     5     6
 Veh Stopping  %     82    98    82    65    95    -     77    94    63    79    92    67
 Do Veh Clear  ?    YES   YES   YES   YES   YES    -    YES   YES   YES   YES   YES   YES
__________________|_____________________|____________________|__________________

   Whole Intersection - Weighted Av Delay (sec) =  29  Level of Service =  D+
   Critical Movements - Weighted Av Delay (sec) =  30  Level of Service =  D
      ''        ''    - Intersection Capacity Utilization (ICU) =  0.57

   Predetermined Cycle Length is 135 seconds (All Minimum times are satisfied)

 * CAPSSI (Release 11) - Based on Delay Methodology Per 1985 Highway Capacity Manual
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                         C A P S S I                                  10-16-97
                 COMPREHENSIVE ANALYSIS PROGRAM
               FOR A SINGLE SIGNALIZED INTERSECTION *


                      BACKGROUND CONDITIONS
                SOLUTION USING PREDETERMINED CYCLE TIMES
                                                                    FLN:stewin
 STEVENS CREEK/WINCHESTER                          A.M Peak Hour    Scenario  2
 _______________________________________________________________________________
                    |                    |                  |
   Movement        EBT   EBL   EBR   SBT   SBL   SBR   WBT   WBL   WBR   NBT   NBL   NBR
 Phase 1 -  11 secs  .     X     .     .     .     .     .     X     .     .     .     .
 Phase 2 -  12 secs  .     .     .     .     .     .     X     X     X     .     .     .
 Phase 3 -  35 secs  X     .     X     .     .     .     X     .     X     .     .     .
 Phase 4 -  17 secs  .     .     .     .     X     .     .     .     X     .     X     .
 Phase 5 -   5 secs  .     .     .     .     .     .     .     .     .     X     X     X
 Phase 6 -  54 secs  .     .     .     X     .     X     .     .     .     X     .     X
 ___________________|____________________|__________________|___________________
                    |                    |                  |
  Critical Mvmt-**  ****                     ****              ****        ****
  Peak 15 Vol -vph  474   145   140   257   131    57   787   330   254  1075   153   270
  Saturation  -vph 5700  3150  1750  5700  1750  Shrd  5700  3150  1750  3800  1750  1750
  Lost time   -sec 2.00  2.00  2.00  2.00  2.00    -   2.00  2.00  2.00  2.00  2.00  2.00
  Relative Sat 'X' 0.34  0.69  0.32  0.16  0.67    -   0.41  0.67  0.31  0.67  0.59  0.36
  Effective Gr-sec   33     9    33    52    15    -     45    21    62    57    20    57
  Move Time   -sec   35    11    35    54    17    -     47    23    64    59    22    59
  Min/Ped Time-sec   25    10    25    30    10    -     27    10    27    30    10    30
  Prog Factor  PAF 1.00  1.00  1.00  1.00  1.00    -   1.00  1.00  1.00  1.00  1.00  1.00
  AvDelay/veh -sec   32    52    32    20    49    -     26    43    17    24    43    20
  Level of Service    D     E     D    C-     E    -     D+    E+    C+    C-    E+    C-
  Av.'Q'/ lane veh    4     3     4     3     4    -      6     5     5    11     5     6
  Veh Stopping  %    82    98    82    65    96    -     77    94    63    80    93    68
  Do Veh Clear  ?   YES   YES   YES   YES   YES    -    YES   YES   YES   YES   YES   YES
 ___________________|____________________|__________________|___________________

       Whole Intersection - Weighted Av Delay (sec) =  29  Level of Service =  D+
       Critical Movements - Weighted Av Delay (sec) =  31  Level of Service =  D
         ''        ''     - Intersection Capacity Utilization (ICU) =  0.58

      Predetermined Cycle Length is 134 seconds (All Minimum times are satisfied)

 * CAPSSI (Release 11) - Based on Delay Methodology Per 1985 Highway Capacity Manual
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97-036

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                               C A P S S I                                12-16-97
                     COMPREHENSIVE ANALYSIS PROGRAM
                  FOR A SINGLE SIGNALIZED INTERSECTION *


                           PROJECT CONDITIONS
                 SOLUTION USING PREDETERMINED CYCLE TIMES
                                                                        FLN:stewin
 STEVENS CREEK/WINCHESTER                              A.M Peak Hour    Scenario  3
 ______________________________________________________________________________________
                       |                    |                  |                  |
    Movement            EBT   EBL   EBR   SBT   SSL   SBR   WBT   WBL   WBR   NBT   NBL   NBR
  Phase 1 -   11 secs    .     X     .     .     .     .     .     X     .     .     .     .
  Phase 2 -   12 secs    .     .     .     .     .     .     X     X     X     .     .     .
  Phase 3 -   35 secs    X     .     X     .     .     .     X     .     X     .     .     .
  Phase 4 -   17 secs    .     .     .     .     X     .     .     .     X     .     X     .
  Phase 5 -   12 secs    .     .     .     .     .     .     .     .     .     X     X     X
  Phase 6 -   48 secs    .     .     .     X     .     X     .     .     .     X     .     X
 ______________________|____________________|__________________|__________________|____________
                       |                    |                  |                  |
   Critical Mvmt-**                  ****        ****                 ****        ****
   Peak 15 Vol -vph     474   145   178   269   131    87   787   330   254  1080   221   270
   Saturation  -vph    5700  3150  1750  5700  1750  Shrd  5700  3150  1750  3800  1750  1750
   Lost time   -sec    2.00  2.00  2.00  2.00  2.00    -   2.00  2.00  2.00  2.00  2.00  2.00
   Relative Sat 'X'    0.34  0.69  0.42  0.18  0.67    -   0.41  0.67  0.32  0.66  0.63  0.36
   Effective Gr-sec      33     9    33    46    15    -     45    21    62    58    27    58
   Move Time   -sec      35    11    35    48    17    -     47    23    64    60    29    60
   Min/Ped Time-sec      25    10    25    30    10    -     27    10    27    30    10    30
   Prog Factor  PAF    1.00  1.00  1.00  1.00  1.00    -   1.00  1.00  1.00  1.00  1.00  1.00
   AvDelay/veh -sec      32    53    33    24    50    -     27    43    18    24    40    20
   Level of Service       D     E     D    C-     E    -     D+    E+    C+    C-    E+    C+
   Av.'Q'/ lane veh       4     3     5     3     4    -      7     5     5    12     7     6
   Veh Stopping  %       82    98    84    70    96    -     77    94    63    80    92    67
   Do Veh Clear  ?      YES   YES   YES   YES   YES    -    YES   YES   YES   YES   YES   YES
 ______________________|____________________|__________________|__________________|____________

      Whole Intersection - Weighted Av Delay (sec) =  29  Level of Service =  D+
      Critical Movements - Weighted Av Delay (sec) =  31  Level of Service =  D
         ''        ''    - Intersection Capacity Utilization (ICU) =  0.60

     Predetermined Cycle Length is 135 seconds (All Minimum times are satisfied)

 * CAPSSI (Release 11) - Based on Delay Methodology Per 1985 Highway Capacity Manual
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97-036

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                           C A P S S I                                  11-10-97
                  COMPREHENSIVE ANALYSIS PROGRAM
              FOR A SINGLE SIGNALIZED INTERSECTION *

                      CUMULATIVE W/PROJECT
               SOLUTION USING PREDETERMINED CYCLE TIMES
                                                                        FLN:STEWIN
STEVENS CREEK/WINCHESTER                               A.M Peak Hour    Scenario  5
____________________________________________________________________________________
                        |                  |                  |
  Movement          EBT   EBL   EBR   SBT   SBL   SBR   WBT   WBL   WBR   NBT   NBL   NBR
Phase 1 -   11 secs   .     X     .     .     .     .     .     X     .     .     .     .
Phase 2 -   12 secs   .     .     .     .     .     .     X     X     X     .     .     .
Phase 3 -   35 secs   X     .     X     .     .     .     X     .     X     .     .     .
Phase 4 -   17 secs   .     .     .     .     X     .     .     .     X     .     X     .
Phase 5 -   12 secs   .     .     .     .     .     .     .     .     .     X     X     X
Phase 6 -   48 secs   .     .     .     X     .     X     .     .     .     X     .     X
____________________|__________________|__________________|__________________|______________
                    |                  |                  |                  |
  Critical Mvmt-**              ****              ****              ****  ****
  Peak 15 Vol -vph   483   145   178   272   131    87   793   333   254  1085   221   276
  Saturation  -vph  5700  3150  1750  5700  1750  Shrd  5700  3150  1750  3800  1750  1750
  Lost time   -sec  2.00  2.00  2.00  2.00  2.00    -   2.00  2.00  2.00  2.00  2.00  2.00
  Relative Sat 'X'  0.35  0.69  0.42  0.18  0.67    -   0.42  0.68  0.32  0.66  0.63  0.37
  Effective Gr-sec    33     9    33    46    15    -     45    21    62    58    27    58
  Move Time   -sec    35    11    35    48    17    -     47    23    64    60    29    60
  Min/Ped Time-sec    25    10    25    30    10    -     27    10    27    30    10    30
  Prog Factor  PAF  1.00  1.00  1.00  1.00  1.00    -   1.00  1.00  1.00  1.00  1.00  1.00
  AvDelay/veh -sec    32    53    33    24    50    -     27    44    18    24    40    20
  Level of Service     D     E     D    C-     E    -     D+    E+    C+    C-    E+    C+
  Av.'Q'/ lane veh     5     3     5     3     4    -      7     5     5    12     7     6
  Veh Stopping  %     83    98    84    70    96    -     77    94    63    80    92    68
  Do Veh Clear  ?    YES   YES   YES   YES   YES    -    YES   YES   YES   YES   YES   YES
____________________|__________________|__________________|__________________|______________

      Whole Intersection - Weighted Av Delay (sec) =  29  Level of Service =  D+
      Critical Movements - Weighted Av Delay (sec) =  31  Level of Service =  D
         ''        ''    - Intersection Capacity Utilization (ICU) =  0.60

    Predetermined Cycle Length is 135 seconds (All Minimum times are satisfied)

* CAPSSI (Release 11) - Based on Delay Methodology Per 1985 Highway Capacity Manual
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97-036

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                              C A P S S I                                  [illegible]-97
                    COMPREHENSIVE ANALYSIS PROGRAM
                 FOR A SINGLE SIGNALIZED INTERSECTION *


                           EXISTING CONDITIONS
                 SOLUTION USING PREDETERMINED CYCLE TIMES
                                                                         FLN:stewin
 STEVENS CREEK/WINCHESTER                               P.M Peak Hour    Scenario  6
 ____________________________________________________________________________________
                     |                    |                    |                    |
   Movement           EBT    EBL    EBR    SBT    SBL    SBR    WBT    WBL    WBR    NBT    NBL    NBR
 Phase 1 -  15 secs    .      X      .      .      .      .      .      X      .      .      .      .
 Phase 2 -  16 secs    .      .      .      .      .      .      X      X      X      .      .      .
 Phase 3 -  34 secs    X      .      X      .      .      .      X      .      X      .      .      .
 Phase 4 -  29 secs    .      .      .      .      X      .      .      .      X      .      X      .
 Phase 5 -   2 secs    .      .      .      .      .      .      .      .      .      X      X      X
 Phase 6 -  39 secs    .      .      .      X      .      X      .      .      .      X      .      X
 ____________________|____________________|____________________|____________________|___________
                     |                    |                    |                    |
  Critical Mvmt-**    ****                        ****                 ****                 ****
  Peak 15 Vol -vph    1001   252    281    940    306    191    882    572    204   [illegible] 267  439
  Saturation  -vph    5700   3150   1750   5700   1750   Shrd   5700   3150   1750  [illegible] 1750 1750
  Lost time   -sec    2.00   2.00   2.00   2.00   2.00    -     2.00   2.00   2.00   2.00   2.00   2.00
  Relative Sat 'X'    0.74   0.83   0.68   0.72   0.87    -     0.44   0.85   0.20  [illegible] 0.71 0.87
  Effective Gr-sec     32     13     32     37     27     -      48     29     77     39     29     39
  Move Time   -sec     34     15     34     39     29     -      50     31     79     41     31     41
  Min/Ped Time-sec     25     10     25     30     10     -      27     10     27     30     10     30
  Prog Factor  PAF    1.00   1.00   1.00   1.00   1.00    -     1.00   1.00   1.00   1.00   1.00   1.00
  AvDelay/veh -sec     38     57     39     35     54     -      25     45     11     30     42     45
  Level of Service     D-     E-     D-     D      E      -      D+     E      B-     D      E+     E
  Av.'Q'/ lane veh     10      4      8     10      9     -       7      8      3  [illegible]  8     12
  Veh Stopping  %      93     98     91     91     97     -      76     96     49     82     93     95
  Do Veh Clear  ?     YES    YES    YES    YES    YES     -     YES    YES    YES    YES    YES    YES
 ____________________|____________________|____________________|____________________|___________

       Whole Intersection - Weighted Av Delay (sec) =  37  Level of Service =  D-
       Critical Movements - Weighted Av Delay (sec) =  43  Level of Service =  E+
          ''        ''    - Intersection Capacity Utilization (ICU) =  0.83

      Predetermined Cycle Length is 135 seconds (All Minimum times are satisfied)

 * CAPSSI (Release 11) - Based on Delay Methodology Per 1985 Highway Capacity Manual
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                          C A P S S I                                10-16-97
                  COMPREHENSIVE ANALYSIS PROGRAM
              FOR A SINGLE SIGNALIZED INTERSECTION *

                       BACKGROUND CONDITIONS
              SOLUTION USING PREDETERMINED CYCLE TIMES
                                                                   FLN:stewin
 STEVENS CREEK/WINCHESTER                         P.M Peak Hour    Scenario  7
________________________________________________________________________________
                      |                     |                    |
 Movement          EBT   EBL   EBR   SBT   SBL   SBR   WBT   WBL   WBR   NBT   NBL   NBR
Phase 1 -  14 secs   .     X     .     .     .     .     .     X     .     .     .     .
Phase 2 -  15 secs   .     .     .     .     .     .     X     X     X     .     .     .
Phase 3 -  32 secs   X     .     X     .     .     .     X     .     X     .     .     .
Phase 4 -  33 secs   .     .     .     .     X     .     .     .     X     .     X     .
Phase 5 -   2 secs   .     .     .     .     .     .     .     .     .     X     X     X
Phase 6 -  39 secs   .     .     .     X     .     X     .     .     .     X     .     X
_____________________|_____________________|____________________|____________________
                      |                     |                    |
 Critical Mvmt-**   ****                    ****              ****                  ****
 Peak 15 Vol -vph   1001   252   283   944   374   191   882   582   280   529   271   474
 Saturation  -vph   5700  3150  1750  5700  1750  Shrd  5700  3150  1750  3800  1750  1750
 Lost time   -sec   2.00  2.00  2.00  2.00  2.00    -   2.00  2.00  2.00  2.00  2.00  2.00
 Relative Sat 'X'   0.79  0.90  0.73  0.73  0.93    -   0.46  0.92  0.28  0.48  0.63  0.94
 Effective Gr-sec     30    12    30    37    31    -     45    27    78    39    33    39
 Move Time   -sec     32    14    32    39    33    -     47    29    80    41    35    41
 Min/Ped Time-sec     25    10    25    30    10    -     27    10    27    30    10    30
 Prog Factor  PAF   1.00  1.00  1.00  1.00  1.00    -   1.00  1.00  1.00  1.00  1.00  1.00
 AvDelay/veh -sec     40    67    42    35    59    -     27    54    11    30    37    54
 Level of Service     E+     F    E+     D    E-    -     D+     E    B-     D    D-     E
 Av.'Q'/ lane veh     10     4     8    10    11    -      7     9     4     7     8    13
 Veh Stopping  %      94    99    93    91    98    -     79    98    50    83    89    98
 Do Veh Clear  ?     YES   YES   YES   YES   YES    -    YES   YES   YES   YES   YES   YES
_____________________|_____________________|____________________|____________________

        Whole Intersection - Weighted Av Delay (sec) =  40  Level of Service =  D-
        Critical Movements - Weighted Av Delay (sec) =  49  Level of Service =  E
           ''        ''    - Intersection Capacity Utilization (ICU) =  0.90

       Predetermined Cycle Length is 135 seconds (All Minimum times are satisfied)

 * CAPSSI (Release 11) - Based on Delay Methodology Per 1985 Highway Capacity Manual
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                      C A P S S I                           10-16-97
              COMPREHENSIVE ANALYSIS PROGRAM
             FOR A SINGLE SIGNALIZED INTERSECTION *


                      PROJECT CONDITIONS
              SOLUTION USING PREDETERMINED CYCLE TIMES
                                                                FLN:stewin
 STEVENS CREEK/WINCHESTER                         P.M Peak Hour    Scenario  8
 ___________________________________________________________________________
                    |                    |                    |
   Movement         |  EBT   EBL   EBR   SBT   SBL   SBR   WBT   WBL   WBR   NBT   NBL   NBR
 Phase 1 -  14 secs    .     X     .     .     .     .     .     X     .     .     .     .
 Phase 2 -  15 secs    .     .     .     .     .     .     X     X     X     .     .     .
 Phase 3 -  33 secs    X     .     X     .     .     .     X     .     X     .     .     .
 Phase 4 -  32 secs    .     .     .     .     X     .     .     .     X     .     X     .
 Phase 5 -   2 secs    .     .     .     .     .     .     .     .     .     X     X     X
 Phase 6 -  38 secs    .     .     .     X     .     X     .     .     .     X     .     X
 ___________________|__________________|__________________|__________________|__________________
                    |                  |                  |                  |
  Critical Mvmt-**                ****              ****              ****                    ****
  Peak 15 Vol -vph  1001   252   376   977   374   191   882   592   230   562   340   474
  Saturation  -vph  5700  3150  1750  5700  1750  Shrd  5700  3150  1750  3800  1750  1750
  Lost time   -sec  2.00  2.00  2.00  2.00  2.00    -   2.00  2.00  2.00  2.00  2.00  2.00
  Relative Sat 'X'  0.76  0.89  0.93  0.76  0.95    -   0.45  0.92  0.27  0.52  0.81  0.96
  Effective Gr-sec    31    12    31    36    30    -     46    27    78    38    32    38
  Move Time   -sec    33    14    33    38    32    -     48    29    80    40    34    40
  Min/Ped Time-sec    25    10    25    30    10    -     27    10    27    30    10    30
  Prog Factor  PAF  1.00  1.00  1.00  1.00  1.00    -   1.00  1.00  1.00  1.00  1.00  1.00
  AvDelay/veh -sec    38    66    58    36    64    -     26    53    11    31    45    57
  Level of Service    D-     F    E-    D-     F    -     D+     E    B-     D    E+    E-
  Av.'Q'/ lane veh    10     4    11    11    11    -      7     9     4     7    10    13
  Veh Stopping  %     93    99    98    92    99    -     78    98    50    84    94    98
  Do Veh Clear  ?    YES   YES   YES   YES   YES    -    YES   YES   YES   YES   YES   YES
 ___________________|__________________|__________________|__________________|__________________

      Whole Intersection - Weighted Av Delay (sec) =  41  Level of Service =  E+
      Critical Movements - Weighted Av Delay (sec) =  57  Level of Service =  E-
         ''        ''    - Intersection Capacity Utilization (ICU) =  0.94

     Predetermined Cycle Length is 134 seconds (All Minimum times are satisfied)

 * CAPSSI (Release 11) - Based on Delay Methodology Per 1985 Highway Capacity Manual
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                         C A P S S I                              11-10-97
                 COMPREHENSIVE ANALYSIS PROGRAM
              FOR A SINGLE SIGNALIZED INTERSECTION *

                     CUMULATIVE W/PROJECT
               SOLUTION USING PREDETERMINED CYCLE TIMES
                                                                  FLN:STEWIN
STEVENS CREEK/WINCHESTER                          P.M Peak Hour   Scenario 10

_______________________________________________________________________________
                   |                  |                  |                 |
   Movement          EBT   EBL   EBR    SBT   SBL   SBR    WBT   WBL   WBR   NBT   NBL   NBR
Phase 1 -  14 secs    .     X     .      .     .     .      .     X     .     .     .     .
Phase 2 -  16 secs    .     .     .      .     .     .      X     X     X     .     .     .
Phase 3 -  32 secs    X     .     X      .     .     .      X     .     X     .     .     .
Phase 4 -  31 secs    .     .     .      .     X     .      .     .     X     .     X     .
Phase 5 -   2 secs    .     .     .      .     .     .      .     .     .     X     X     X
Phase 6 -  39 secs    .     .     .      X     .     X      .     .     .     X     .     X
___________________|__________________|__________________|_________________|___________
                   |                  |                  |                 |
 Critical Mvmt-**               ****          ****                ****                 ****
 Peak 15 Vol -vph   1038   252   376    995   374   191    919   601   280   580   340   493
 Saturation  -vph   5700  3150  1750   5700  1750  Shrd   5700  3150  1750  3800  1750  1750
 Lost time   -sec   2.00  2.00  2.00   2.00  2.00   -     2.00  2.00  2.00  2.00  2.00  2.00
 Relative Sat 'X'   0.81  0.89  0.96   0.75  0.99   -     0.47  0.91  0.28  0.52  0.84  0.97
 Effective Gr-sec    30    12    30     37    29    -      46    28    77    39    31    39
 Move Time   -sec    32    14    32     39    31    -      48    30    79    41    33    41
 Min/Ped Time-sec    25    10    25     30    10    -      27    10    27    30    10    30
 Prog Factor  PAF   1.00  1.00  1.00   1.00  1.00   -     1.00  1.00  1.00  1.00  1.00  1.00
 AvDelay/veh -sec    40    66    65     35    72    -      26    52    11    31    47    59
 Level of Service    E+    F     F      D-    F     -      D+    E     B-    D     E     E-
 Av.'Q'/ lane veh    10     4    11     11    11    -       7     9     4     8    10    13
 Veh Stopping  %     95    99    99     91   100    -      78    98    51    84    95    99
 Do Veh Clear  ?    YES   YES   YES    YES    NO    -     YES   YES   YES   YES   YES   YES
___________________|__________________|__________________|_________________|___________
                        >>>>  Intersection Unstable  <<<<

      Whole Intersection - Weighted Av Delay (sec) =  42  Level of Service =  E+
      Critical Movements - Weighted Av Delay (sec) =  61  Level of Service =  F
          ''        ''   - Intersection Capacity Utilization (ICU) =  0.96

      Predetermined Cycle Length is 134 seconds (All Minimum times are satisfied)

 * CAPSSI (Release 11) - Based on Delay Methodology Per 1985 Highway Capacity Manual
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97-036

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                           C A P S S I                              11-11-97
                  COMPREHENSIVE ANALYSIS PROGRAM
                FOR A SINGLE SIGNALIZED INTERSECTION *

                             MITIGATED
                       CUMULATIVE W/PROJECT
              SOLUTION USING PREDETERMINED CYCLE TIMES
                                                                   FLN:stewin
STEVENS CREEK/WINCHESTER                           P.M Peak Hour   Scenario 11
_______________________________________________________________________________
                    |                  |                  |                  |
   Movement         EBT   EBL   EBR   SBT   SBL   SBR   WBT   WBL   WBR   NBT   NBL   NBR
Phase 1 -  15 secs   .     X     .     .     .     .     .     X     .     .     .     .
Phase 2 -  17 secs   .     .     .     .     .     .     X     X     X     .     .     .
Phase 3 -  37 secs   X     .     X     .     .     .     X     .     X     .     .     .
Phase 4 -  21 secs   .     .     .     .     X     .     .     .     X     .     X     .
Phase 5 -   2 secs   .     .     .     .     .     .     .     .     .     X     X     X
Phase 6 -  42 secs   .     .     .     X     .     X     .     .     .     X     .     X
____________________|__________________|__________________|__________________|_________
                    |                  |                  |                  |
 Critical Mvmt-**               ****              ****              ****                  ****
 Peak 15 Vol -vph   1038   252   376   995   374   191   919   601   280   580   340   493
 Saturation  -vph   5700  3150  1750  5700  3150  Shrd  5700  3150  1750  3800  3150  1750
 Lost time   -sec   2.00  2.00  2.00  2.00  2.00    -   2.00  2.00  2.00  2.00  2.00  2.00
 Relative Sat 'X'   0.70  0.82  0.82  0.70  0.84    -   0.42  0.85  0.29  0.49  0.69  0.90
 Effective Gr-sec     35    13    35    40    19    -     52    30    73    42    21    42
 Move Time   -sec     37    15    37    42    21    -     54    32    75    44    23    44
 Min/Ped Time-sec     25    10    25    30    10    -     27    10    27    30    10    30
 Prog Factor  PAF   1.00  1.00  1.00  1.00  1.00    -   1.00  1.00  1.00  1.00  1.00  1.00
 AvDelay/veh -sec     35    56    43    33    52    -     23    45    13    29    43    46
 Level of Service     D-    E-    E+    D     E     -     C-    E+    B-    D+    E+    E
 Av.'Q'/ lane veh     10     4    10    10     6    -      7     9     5     7     5    13
 Veh Stopping  %      90    98    94    89    97    -     73    96    54    81    95    96
 Do Veh Clear  ?     YES   YES   YES   YES   YES    -    YES   YES   YES   YES   YES   YES
____________________|__________________|__________________|__________________|_________

       Whole Intersection - Weighted Av Delay (sec) =  36  Level of Service =  D-
       Critical Movements - Weighted Av Delay (sec) =  46  Level of Service =  E
          ''         ''   - Intersection Capacity Utilization (ICU) =  0.86

      Predetermined Cycle Length is 134 seconds (All Minimum times are satisfied)

 * CAPSSI (Release 11) - Based on Delay Methodology Per 1985 Highway Capacity Manual
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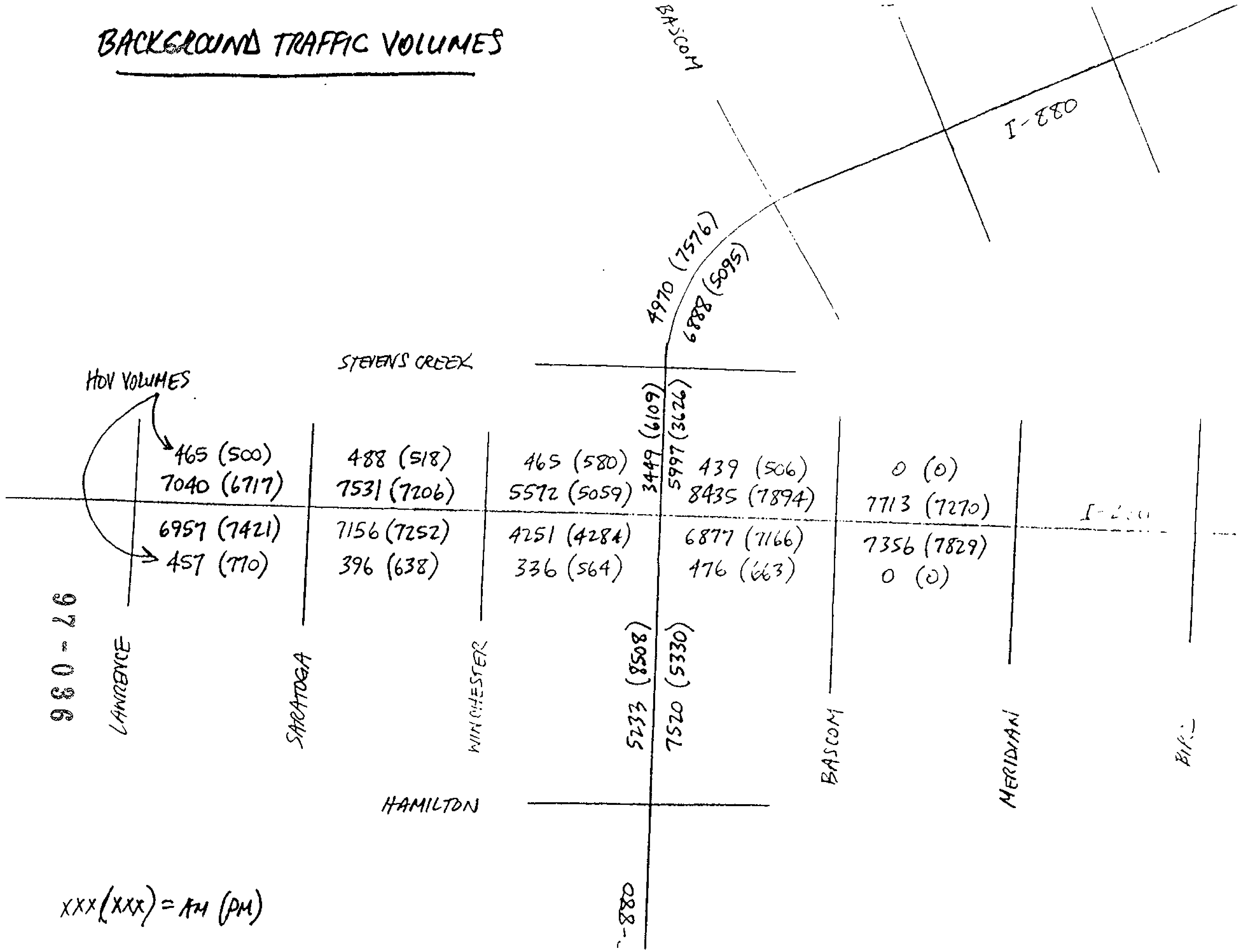
Appendix F

Freeway Volumes

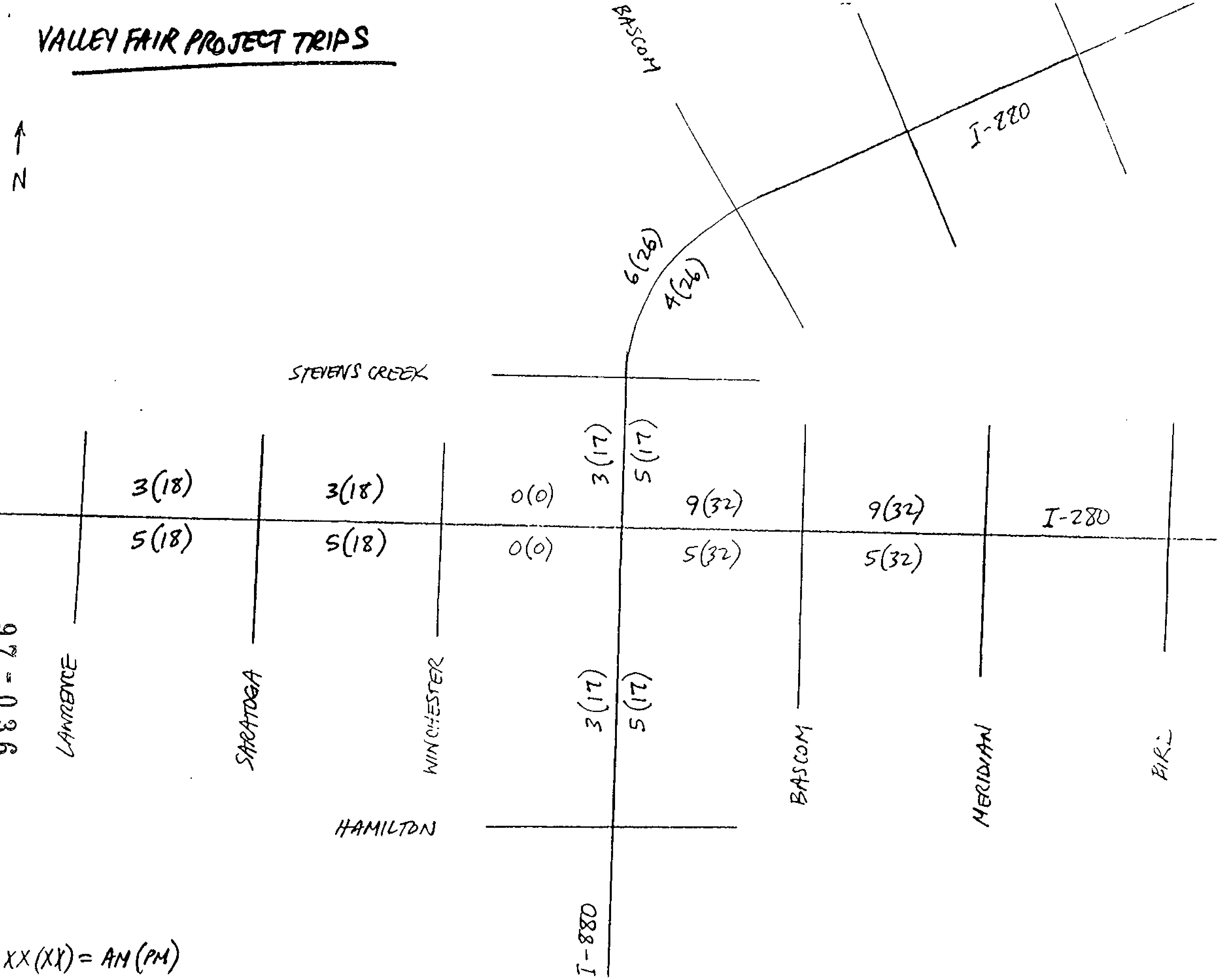
97-036

BACKGROUND TRAFFIC VOLUMES



97-036

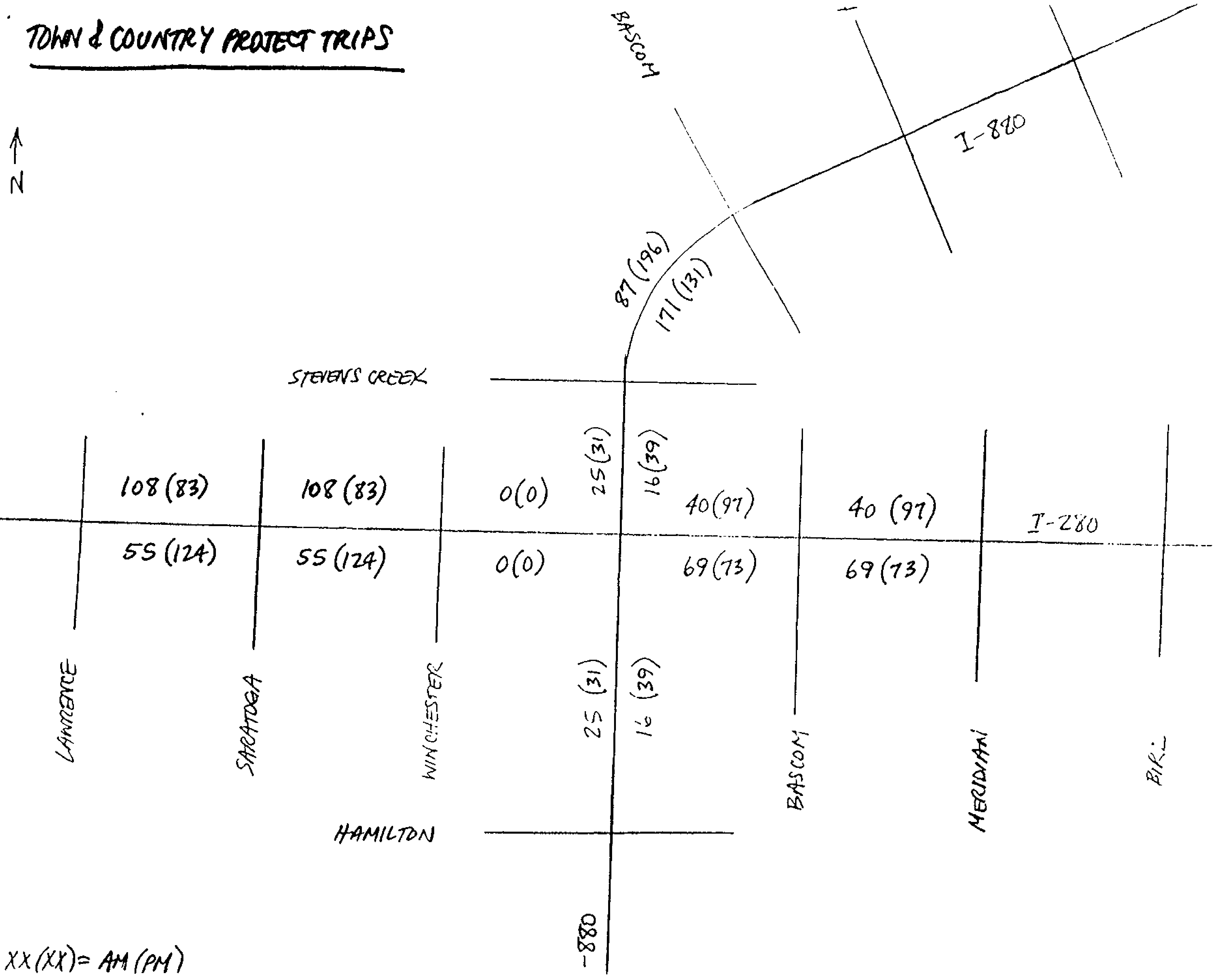
VALLEY FAIR PROJECT TRIPS



97 - 036

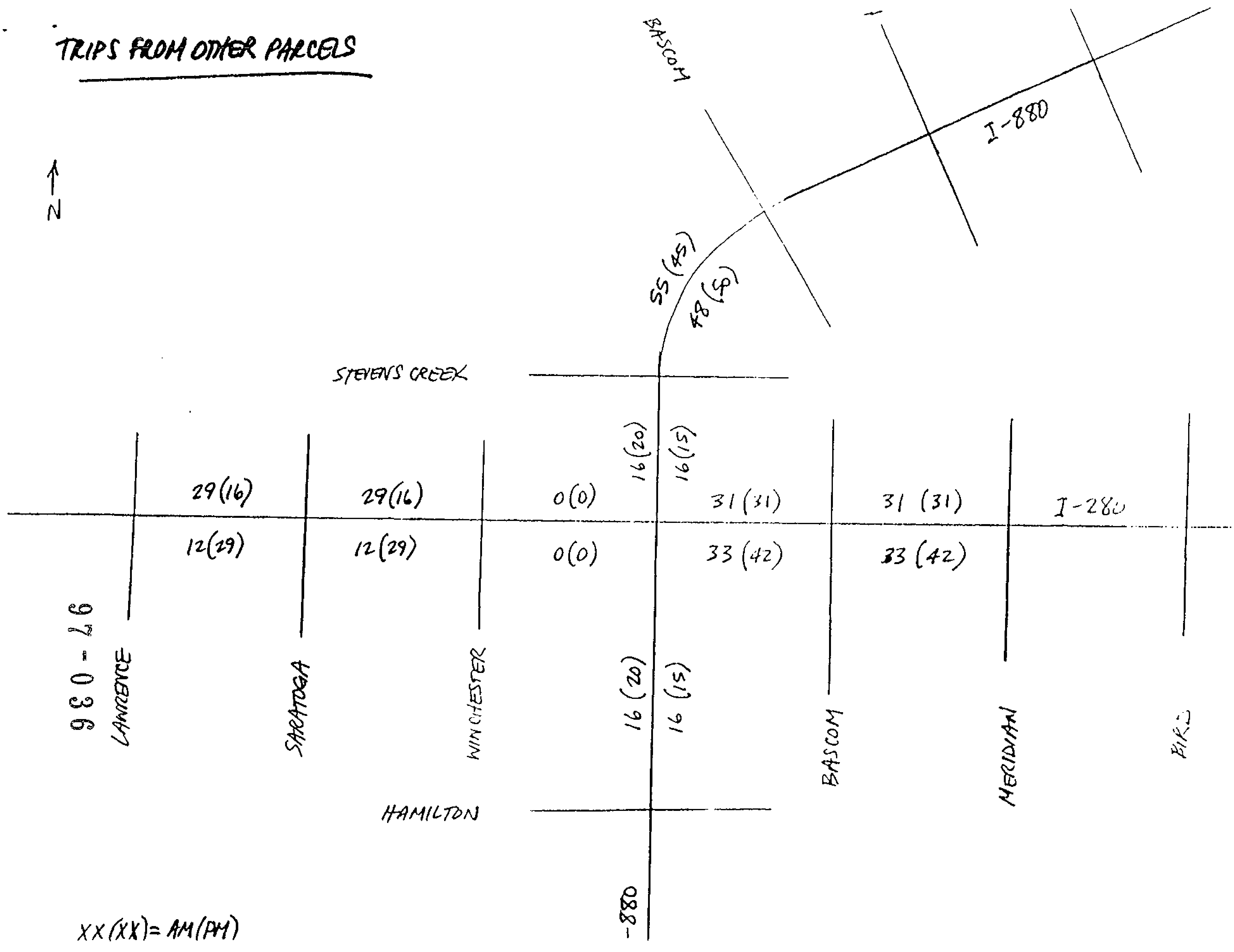
XX(XX) = AM(PM)

TOWN & COUNTRY PROJECT TRIPS



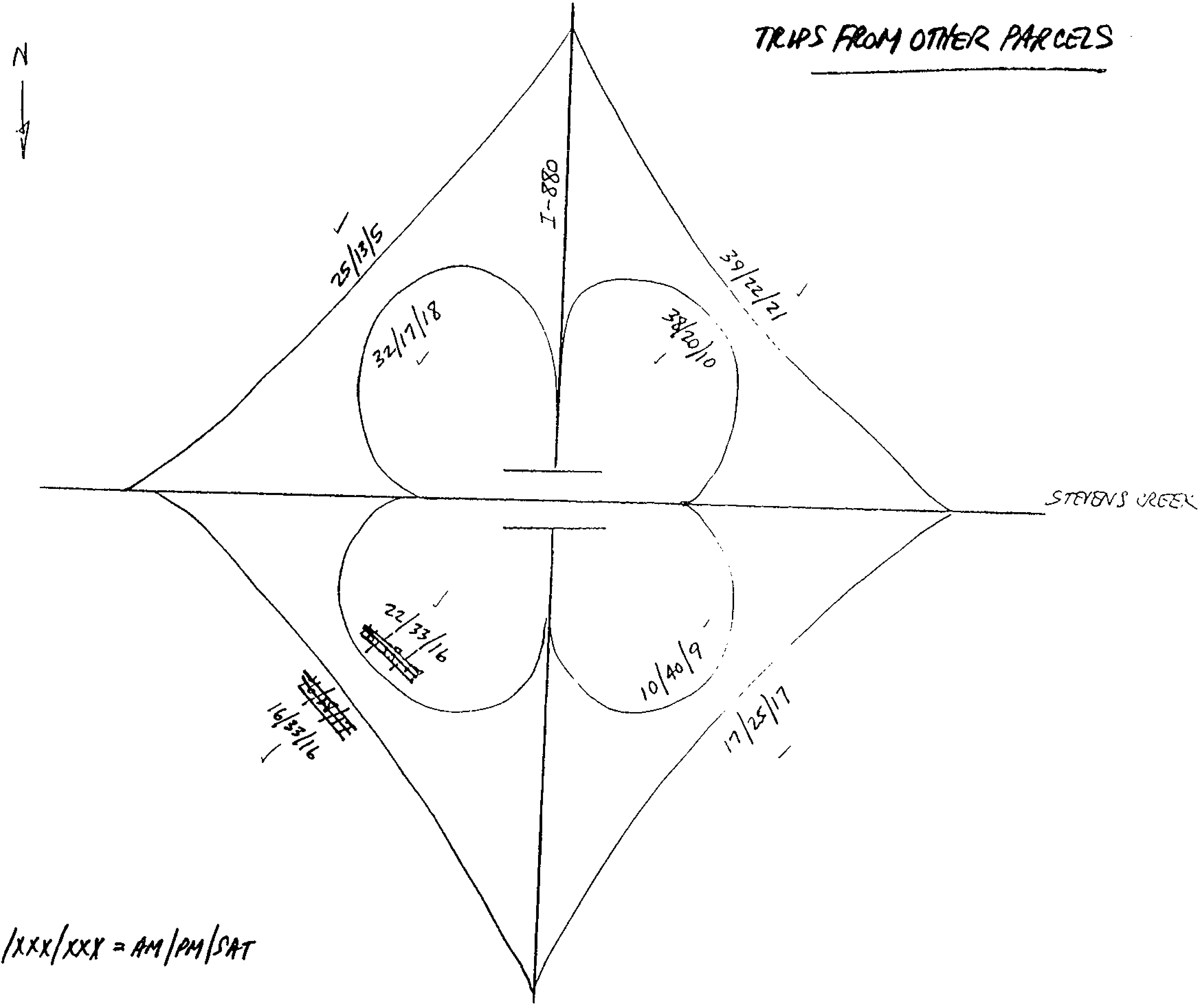
97 - 036

TRIPS FROM OTHER PARCELS



97-036

TRIPS FROM OTHER PARCELS

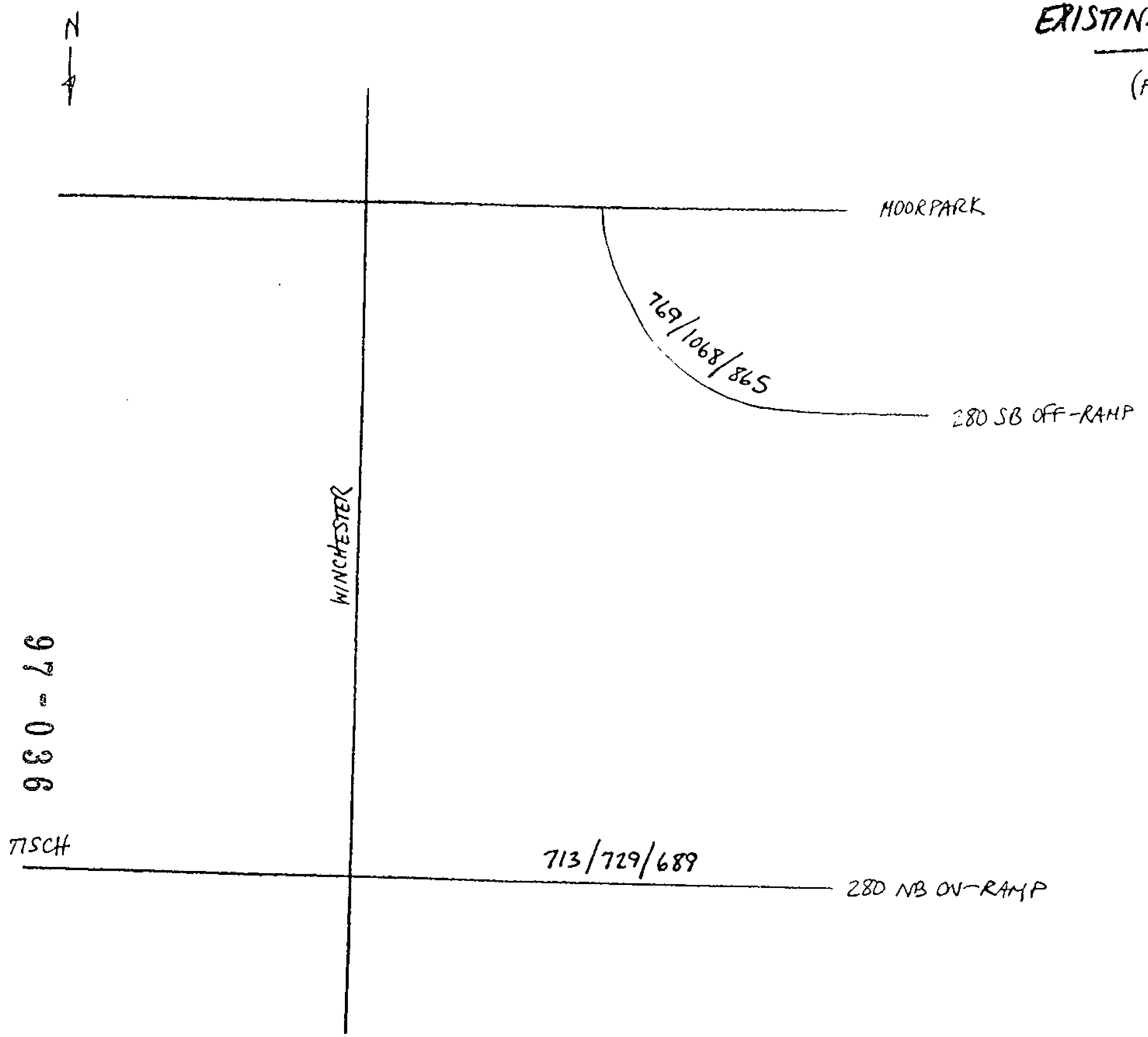


XXX/XXX/XXX = AM/PM/SAT

97-036

EXISTING VOLUMES

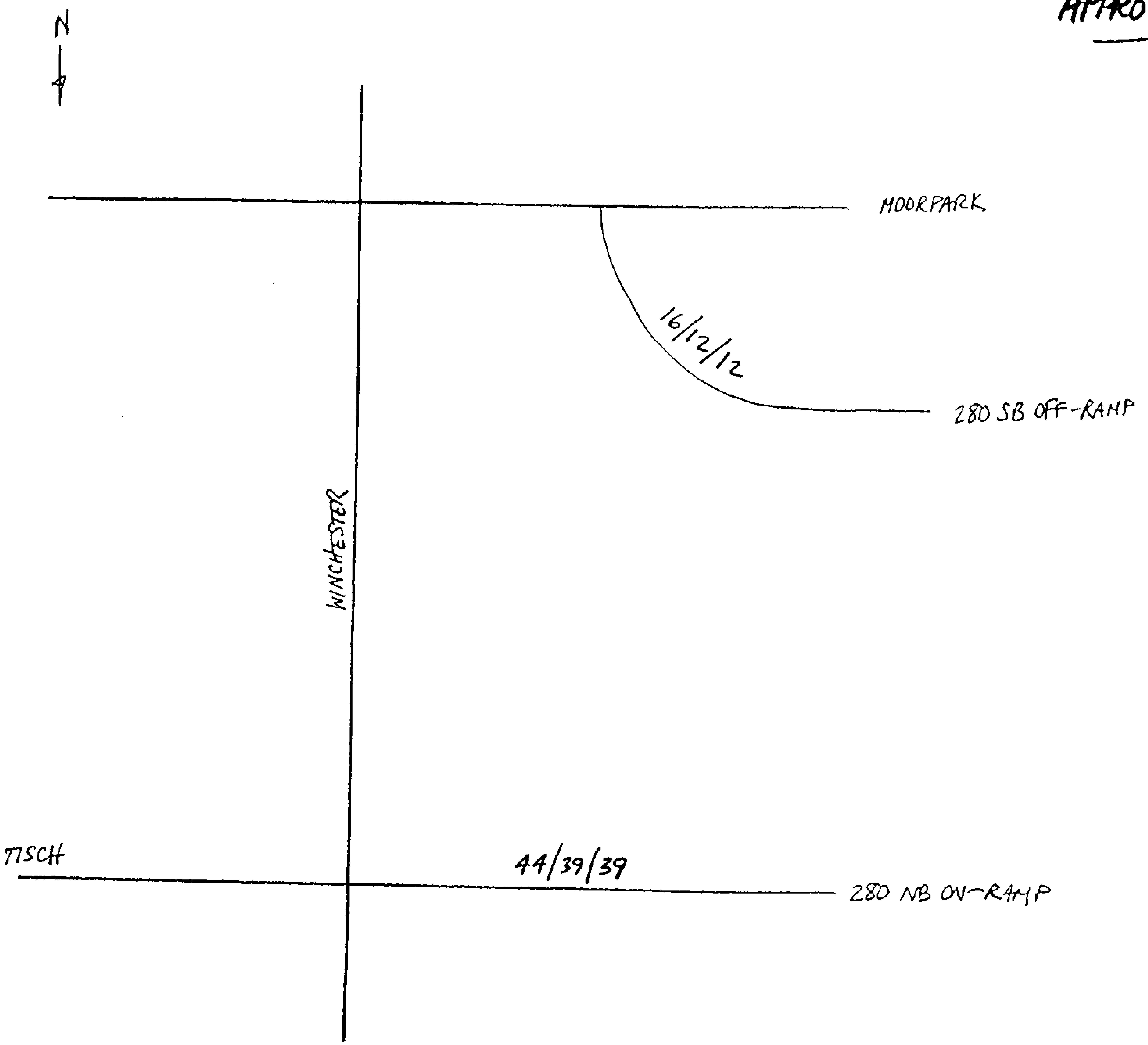
(FROM INTERSECTION COUNTS)



97-036

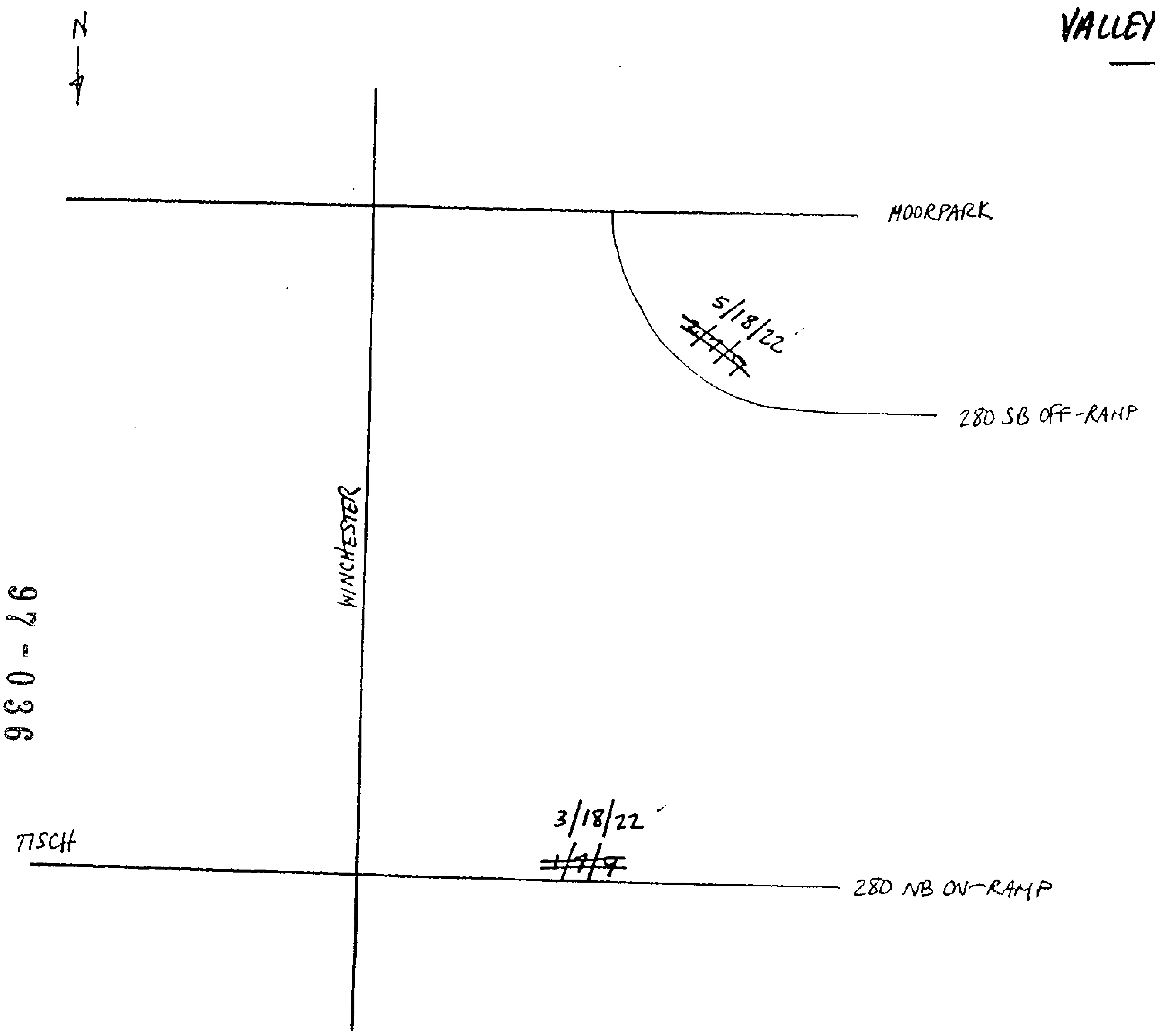
XXX/XXX/XXX = AM/PM/SAT

APPROVED TRIPS



XXX/XXX/XXX = AM/PM/SAT

VALLEY FAIR PROJECT TRIPS

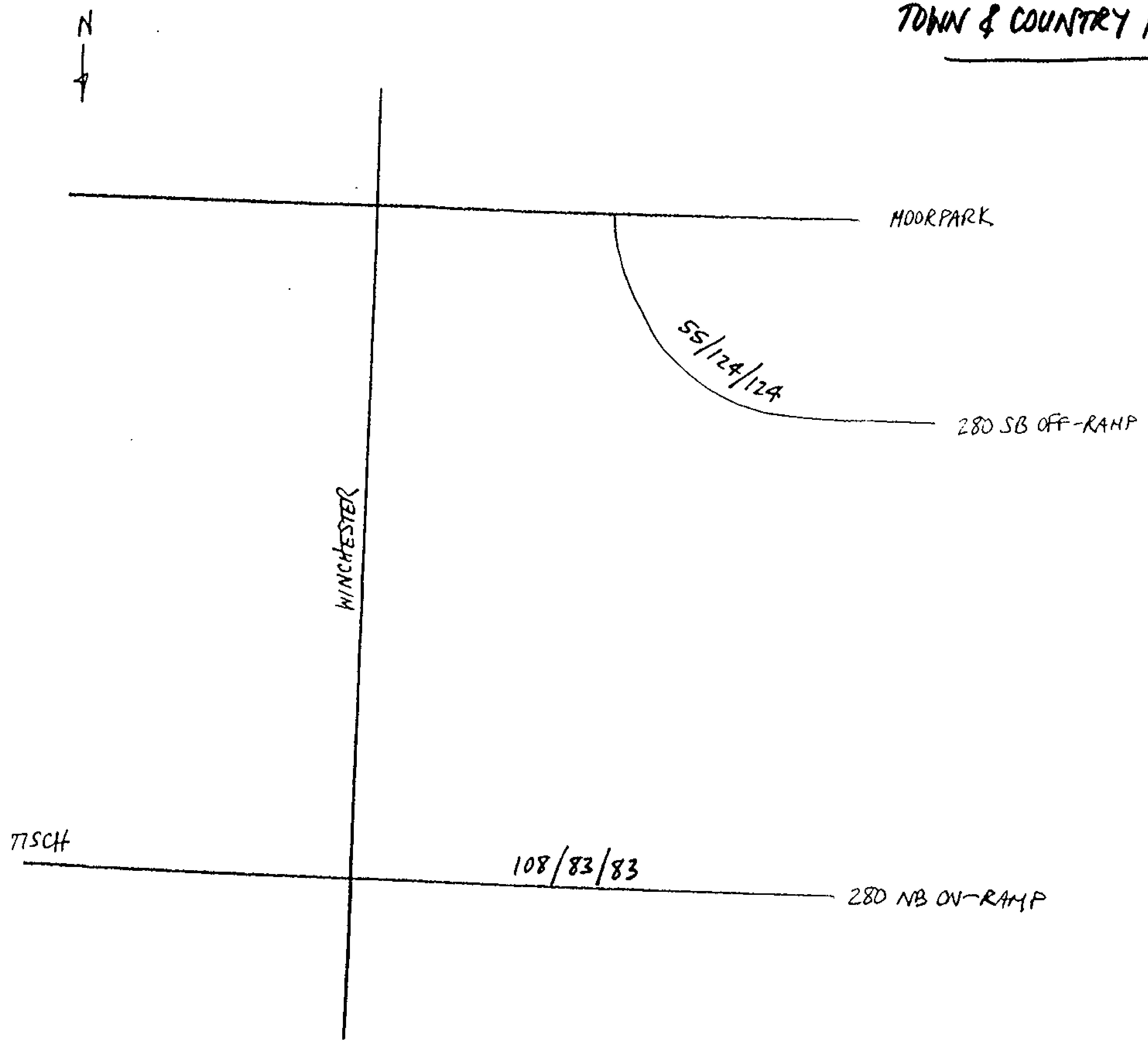


SAT = 1.24 x PM

XXX/XXX/XXX = AM/PM/SAT

97-036

TOWN & COUNTRY PROJECT TRIPS



SAT ≅ PM

XXX/XXX/XXX = AM/PM/SAT

TRAFFIC VOLUMES SYSTEM
LATEST TRAFFIC YEAR SELECTED
PEAK HOUR VOLUME DATA

		LOCATION							AM PEAK								PM PEAK						
DI	RTE	CO	PRE	PM	CS	LEG	YR	+/-	1 WAY PHV	% K	% D	% KD	HR	DAY	MNTH	+/-	1 WAY PHV	% K	% D	% KD	HR	DAY	MNTH
04	012	SON		030650	072	A	93	-	607	7.53	59.86	4.51	12	SAT	JUN	-	651	8.89	54.39	4.84	06	THU	JUN
04	012	SON		037505	073	B	93	+	838	8.47	56.70	4.80	12	MON	MAR	+	903	8.96	57.70	5.17	02	MON	DEC
04	012	SON		041361	005	B	93	-	468	10.57	64.02	6.77	12	SUN	MAR	-	525	11.18	67.92	7.59	01	SAT	SEP
04	012	NAP		000000	006	A	93	+	1,061	10.05	68.45	6.88	12	SUN	MAR	+	1,251	11.61	69.81	8.10	01	SUN	MAR
04	012	NAP		000240	074	A	93	-	1,178	7.82	59.29	4.64	08	THU	DEC	-	1,290	9.47	53.64	5.08	05	WED	DEC
04	012	NAP		002300	306	B	95	-	1,174	8.82	51.40	4.53	12	SUN	JUN	+	1,422	10.53	52.18	5.49	05	FRI	JUL
04	013	ALA		004262	027	A	94	-	2,552	10.86	50.98	5.54	09	WED	FEB	+	2,417	10.14	51.72	5.24	06	THU	FEB
04	013	ALA		008300	124	A	94	+	3,199	8.91	60.11	5.36	08	WED	MAY	-	3,606	9.91	60.90	6.04	06	TUE	FEB
04	013	ALA		013180	125	B	94	+	1,053	7.13	58.53	4.17	12	WED	AUG	-	1,269	9.05	55.54	5.03	01	SAT	NOV
04	.017	SCL		000069	552	A	95	+	3,602	7.53	83.03	6.25	07	THU	MAY	+	3,331	9.15	63.23	5.79	06	SAT	AUG
04	017	SCL		006164	431	B	95	+	4,151	8.34	71.51	5.96	08	FRI	NOV		3,850	8.81	62.81	5.53	06	TUE	AUG
04	017	SCL		007073	432	A	95	+	4,183	5.69	80.55	4.58	08	MON	JUL		4,195	7.90	58.26	4.60	05	THU	DEC
04	017	SCL		013930	400	B	95	+	7,940	6.74	67.66	4.56	08	MON	FEB	-	8,947	8.59	59.85	5.14	06	WED	AUG
04	024	ALA	R	001848	130	A	94	+	9,999	11.81	68.59	8.10	10	THU	JUL	+	6,340	7.91	64.99	5.14	06	WED	JAN
04	024	CC	R	004397	417	B	94	-	8,595	7.24	76.97	5.57	07	TUE	JAN	+	8,396	8.71	62.45	5.44	06	TUE	OCT
04	024	CC	R	006257	543	B	94	-	8,424	7.00	78.57	5.50	07	TUE	JAN	+	8,191	8.59	62.29	5.35	06	THU	APR
04	025	SCL		002520	063	B	95	+	1,048	9.01	66.33	5.98	08	TUE	OCT	-	1,087	9.04	68.58	6.20	06	WED	JUL
04	029	NAP		000690	076	B	93	+	1,160	8.93	50.24	4.49	12	SUN	MAR		1,327	10.10	50.78	5.13	05	FRI	MAR
04	029	NAP		004706	007	B	93	-	1,463	7.89	54.27	4.28	08	THU	SEP	+	1,752	8.84	57.96	5.12	05	THU	MAR
04	029	NAP		004706	008	A	93	-	2,311	8.16	62.21	5.08	08	TUE	JUN	-	2,244	9.29	53.04	4.93	06	FRI	SEP
04	029	NAP	R	006196	009	A	93	-	1,727	8.17	63.10	5.16	08	WED	SEP	+	1,826	9.04	60.28	5.45	05	FRI	DEC
04	029	NAP		010305	411	A	93	-	1,943	8.17	58.09	4.75	08	THU	SEP	+	2,058	9.18	54.73	5.02	05	FRI	MAR
04	029	NAP		013058	079	A	93	-	1,454	7.94	56.03	4.45	09	THU	MAR		1,623	8.76	56.75	4.97	04	WED	SEP
04	029	NAP		024595	407	A	93	+	716	7.35	58.54	4.30	12	THU	JUN		967	9.95	58.46	5.82	05	THU	JUN
04	029	NAP		028750	080	A	93	-	995	8.49	64.44	5.47	12	MON	DEC		1,161	10.02	63.69	6.38	04	FRI	JUN
04	029	NAP		036893	010	A	93	-	533	9.15	58.06	5.31	12	SAT	MAR	+	675	11.35	59.31	6.73	01	SAT	JUN
04	029	NAP		037902	081	A	93	-	223	9.10	63.17	5.75	11	MON	JUN	-	292	11.57	65.03	7.52	04	SUN	MAR
04	035	SCR		002870	174	B	93	-	81	17.46	56.64	9.89	11	SUN	MAY		79	13.31	72.48	9.65	05	WED	FEB
04	035	SCL		014100	051	B	93	-	115	9.33	89.15	8.32	12	SUN	MAY	+	179	15.47	83.64	12.94	11	WED	AUG
04	035	SM		023037	053	B	93	-	142	11.28	50.90	5.74	12	SUN	MAY	+	229	16.25	56.97	9.26	04	SUN	MAY
04	035	SM	R	023037	175	A	93	+	1,542	20.57	55.29	11.37	08	THU	NOV	+	1,679	18.90	65.53	12.39	06	WED	NOV
04	035	SM	R	028687	176	B	93	+	1,667	8.55	69.63	5.95	08	FRI	NOV	-	1,692	9.64	62.64	6.04	06	THU	FEB
04	035	SM		029700	437	B	93	+	1,143	8.22	53.66	4.41	08	THU	MAY	-	1,382	10.42	51.20	5.34	06	WED	MAY
04	035	SM		030834	177	A	93	+	1,292	9.08	66.60	6.05	08	THU	NOV	+	1,717	11.04	72.82	8.04	02	FRI	MAY
04	035	SF		003164	107	B	93	+	1,338	8.05	65.08	5.24	08	WED	FEB	+	1,337	9.06	57.75	5.23	05	SAT	FEB
04	037	MRN		014473	410	O	93	-	1,783	9.24	69.32	6.41	08	TUE	OCT	+	2,148	11.18	69.05	7.72	06	WED	APR
04	061	ALA		018520	131	A	94	+	1,707	7.50	60.92	4.57	08	WED	MAY	-	2,085	10.17	54.84	5.58	06	THU	MAY
04	061	ALA		021867	132	B	94	-	701	7.15	52.59	3.76	12	TUE	FEB	-	1,241	10.22	65.18	6.66	04	WED	FEB
04	077	ALA		000098	029	A	94	-	1,091	7.30	74.57	5.44	08	TUE	MAY	+	1,032	8.63	59.69	5.15	06	MON	NOV
04	080	ALA		001989	500	A	94	-	10,799	7.14	57.39	4.10	08	THU	MAY	+	10,737	7.04	57.85	4.07	06	WED	JUN

s/o I-280

[illegible] AVE

I-280

97-036

TRAFFIC VOLUMES SYSTEM
LATEST TRAFFIC YEAR SELECTED
PEAK HOUR VOLUME DATA

DI	RTE	LOCATION CO	PRE	PM	CS	LEG	YR	+/-	AM PEAK 1 WAY PHV	AM PEAK % K	AM PEAK % D	AM PEAK % KD	HR	DAY	MNTH	+/-	PM PEAK 1 WAY PHV	PM PEAK % K	PM PEAK % D	PM PEAK % KD	HR	DAY	MNTH
04	280	SF	R	003279	106	B	93	+	7,511	7.27	71.99	5.23	08	WED	AUG	-	8,281	8.42	68.55	5.77	05	MON	AUG
04	280	SF	R	006603	113	B	93	-	2,989	13.53	77.16	10.44	09	TUE	AUG	-	2,805	18.72	52.33	9.80	07	THU	MAY
04	580	ALA		000422	151	A	93	+	5,582	7.13	79.73	5.68	07	FRI	JUL	-	6,157	9.09	68.97	6.27	05	FRI	OCT
04	580	ALA	R	008265	152	A	93	+	5,690	7.34	81.20	5.96	07	WED	JUL		6,435	9.80	68.81	6.74	06	FRI	APR
04	580	ALA	R	030589	038	A	93	+	8,431	9.84	64.50	6.35	08	THU	APR	-	8,826	9.79	67.82	6.64	05	THU	JUL
04	580	ALA	R	038309	537	B	93	+	7,907	9.06	60.50	5.48	08	THU	OCT	-	7,886	9.36	58.41	5.47	06	THU	JUL
04	580	MRN		004782	075	B	93	-	1,894	8.16	75.31	6.15	07	MON	JUL	+	1,403	7.38	61.64	4.55	04	TUE	JUL
04	680	SCL	M	000385	224	A	94	-	9,155	8.35	54.39	4.54	08	TUE	APR	-	9,704	9.40	51.19	4.81	06	TUE	OCT
04	680	SCL	M	002376	233	A	94	-	9,374	8.68	64.37	5.59	08	WED	JUL	-	8,857	8.95	59.01	5.28	06	THU	JAN
04	680	ALA	M	001870	039	A	94	-	6,585	10.83	56.30	6.10	08	THU	OCT	+	6,180	9.77	58.56	5.72	06	THU	JUL
04	680	ALA	R	006396	155	B	94	-	7,614	9.11	76.59	6.98	07	TUE	APR	+	6,365	9.31	62.04	5.78	06	FRI	OCT
04	680	CC	R	006760	419	D	94	-	6,343	9.32	59.65	5.56	08	WED	OCT	+	5,618	8.84	55.68	4.92	06	THU	JAN
04	680	CC		012717	302	D	94	+	6,115	8.68	51.10	4.44	08	THU	JUL		6,224	8.24	54.84	4.52	06	MON	JAN
04	680	CC	R	018707	301	B	94	+	7,577	6.95	56.32	3.91	08	TUE	OCT	+	8,710	8.23	54.66	4.50	05	FRI	JAN
04	680	CC		021191	043	B	94	-	6,360	7.92	74.40	5.89	08	WED	OCT	+	5,745	9.26	57.52	5.33	05	FRI	JAN
04	680	CC		022429	161	A	94	-	5,123	9.42	59.12	5.57	08	TUE	OCT	+	5,055	9.90	55.53	5.50	06	FRI	OCT
04	880	SCL		001251	300	B	93	+	7,302	7.70	67.21	5.18	08	TUE	MAY	-	7,568	8.77	61.18	5.37	06	WED	MAY
04	880	ALA		002283	127	A	93	-	5,130	7.06	61.89	4.37	07	WED	MAY		6,196	8.22	64.19	5.28	06	WED	NOV
04	880	ALA		018349	128	A	93	+	9,162	9.10	50.58	4.60	08	TUE	NOV	-	9,324	8.96	52.27	4.68	05	FRI	NOV
04	880	ALA		026607	129	A	93	-	7,138	7.45	51.64	3.85	08	THU	MAY	-	7,557	7.79	52.30	4.07	04	FRI	MAY
04	980	ALA		001510	520	B	94	-	9,845	7.92	66.33	5.25	09	THU	JAN	+	8,185	7.50	58.23	4.37	06	THU	MAY

S/O BASCOM

xcon

97-036

TRAFFIC VOLUMES SYSTEM
LATEST TRAFFIC YEAR SELECTED
PEAK HOUR VOLUME DATA

97 - 036

		LOCATION							AM PEAK								PM PEAK						
									1 WAY	%	%	%					1 WAY	%	%	%			
DI	RTE	CO	PRE	PM	CS	LEG	YR	+/-	PHV	K	D	KD	HR	DAY	MNTH	+/-	PHV	K	D	KD	HR	DAY	MNTH
04	128	NAP		023896	022	A	93	-	125	13.92	64.77	9.02	12	SUN	MAR	+	220	25.40	62.50	15.88	01	SAT	JUN
04	129	SCR	L	000000	204	A	95	-	741	9.37	52.59	4.93	08	TUE	OCT	-	844	10.54	53.28	5.62	06	FRI	JUL
04	129	SCR		001400	205	B	95	+	684	8.93	73.00	6.52	07	WED	JUL	-	836	12.18	65.41	7.97	06	TUE	OCT
04	129	SCR		007200	551	A	95	+	395	8.72	62.30	5.43	10	TUE	JAN		463	10.09	63.08	6.36	01	WED	JUN
04	130	SCL		000000	059	A	95	-	1,517	6.31	78.93	4.98	08	THU	OCT	+	1,450	8.70	54.68	4.76	05	FRI	OCT
04	130	SCL		006060	206	A	95	+	79	18.76	55.63	10.44	11	SUN	APR	-	114	25.10	60.00	15.06	02	SUN	APR
04	131	MRN		000000	101	A	93	-	2,154	8.21	58.68	4.82	09	FRI	OCT		2,125	8.23	57.71	4.75	05	SAT	OCT
04	131	MRN		004392	102	B	93	+	516	8.93	72.88	6.51	12	SUN	JUL	+	634	11.03	72.46	7.99	02	SUN	JUL
04	152	SCR	T	000310	207	A	95	+	939	8.27	58.03	4.80	09	WED	APR	-	1,016	9.74	53.28	5.19	05	THU	OCT
04	152	SCR	R	001995	209	B	95	+	675	9.40	53.32	5.01	12	SUN	JUL	+	837	8.24	75.47	6.22	11	SAT	JUL
04	152	SCL		000000	060	0	95	-	480	12.96	71.01	9.20	12	SAT	JUL	-	484	14.99	61.89	9.28	02	SUN	JUL
04	152	SCL		005030	210	A	95	-	329	11.06	57.12	6.32	12	SUN	JUL	+	440	12.39	68.22	8.45	07	SUN	JUL
04	152	SCL	M	010277	211	B	95	+	1,210	7.27	53.90	3.92	12	SUN	APR	-	1,588	9.77	52.64	5.14	06	FRI	APR
04	152	SCL	R	021977	061	B	95	-	714	7.79	54.75	4.27	12	SAT	JUL	+	984	9.65	60.89	5.88	06	FRI	JUL
04	152	SCL	R	021977	427	A	95	-	1,096	9.37	55.55	5.21	11	SAT	JUL	+	1,362	10.91	59.29	6.47	05	FRI	JUL
04	152	SCL	R	026309	307	A	95	-	5,701	34.51	82.68	28.53	07	WED	SEP	+	6,215	50.75	61.29	31.10	05	MON	SEP
04	156	SCL	R	000602	062	B	95	-	477	9.43	57.40	5.41	11	SAT	JUL	+	581	11.35	58.10	6.59	07	SUN	JUL
04	160	CC		000000	140	A	94	+	449	7.25	63.69	4.62	11	SAT	OCT	-	625	10.71	60.04	6.43	05	FRI	JAN
04	185	ALA		000000	144	A	94	-	858	9.72	51.41	5.00	12	SAT	FEB	-	921	9.95	53.89	5.36	05	FRI	FEB
04	185	ALA		005729	034	B	94	+	925	7.84	54.32	4.26	12	FRI	AUG	+	1,098	9.24	54.71	5.06	05	FRI	FEB
04	236	SCR		000000	213	A	95	-	614	11.45	70.41	8.06	11	SAT	FEB		602	11.62	68.02	7.90	01	SAT	FEB
04	236	SCR		017721	214	B	95	-	75	18.65	69.44	12.95	12	SAT	AUG	+	131	25.73	87.92	22.62	07	SUN	AUG
04	237	SCL	R	000608	215	A	95	+	3,225	9.79	74.67	7.31	09	FRI	NOV	-	2,744	9.32	66.70	6.22	06	WED	MAY
04	238	ALA		000000	146	A	94	-	1,785	10.30	59.90	6.17	09	MON	MAY	+	1,685	10.52	55.35	5.82	06	MON	MAY
04	238	ALA		006780	421	B	94	+	1,667	11.14	60.25	6.71	08	FRI	NOV		1,514	11.20	54.44	6.10	06	THU	MAY
04	238	ALA		016279	148	A	94	-	3,293	6.36	70.32	4.47	12	THU	AUG		3,910	7.15	74.21	5.31	04	MON	NOV
04	242	CC	R	000000	149	A	94	-	3,143	5.97	71.30	4.26	07	FRI	JUL	+	3,482	8.25	57.09	4.71	06	THU	APR
04	242	CC	R	003398	036	B	94	-	3,283	6.82	68.47	4.67	07	THU	JUL	+	3,201	7.75	58.77	4.55	05	TUE	JUL
04	260	ALA	R	001924	150	B	94	-	2,859	7.04	65.24	4.59	08	TUE	NOV	+	2,999	8.04	59.93	4.82	04	THU	FEB
04	262	ALA	R	001070	037	B	94	-	3,426	8.30	73.22	6.08	09	TUE	AUG	+	2,515	6.98	63.90	4.46	06	WED	NOV
04	280	SCL	L	005408	217	Ⓐ	93	+	9,999	8.43	55.92	4.71	08	TUE	MAY	+	9,999	8.76	53.78	4.71	06	TUE	MAY
04	280	SCL		010741	218	Ⓑ	93	+	9,187	9.95	58.02	5.77	08	TUE	NOV		8,999	8.97	63.06	5.66	05	WED	NOV
04	280	SCL		014125	529	A	93	+	6,867	10.98	64.26	7.06	08	THU	NOV	-	6,622	10.97	62.03	6.80	06	MON	AUG
04	280	SM	R	003337	220	A	93	-	6,131	11.29	66.67	7.53	09	THU	FEB	+	6,091	12.12	61.67	7.47	06	FRI	NOV
04	280	SM	R	005600	304	B	95	-	6,514	12.26	64.04	7.85	09	FRI	SEP	+	6,097	12.53	58.65	7.35	06	FRI	NOV
04	280	SM		011040	221	B	93	-	5,784	11.81	59.41	7.02	08	THU	NOV	+	5,930	12.29	58.52	7.19	06	THU	NOV
04	280	SM	R	019278	222	A	93	+	4,782	10.90	51.92	5.66	08	THU	NOV	-	5,177	11.26	54.40	6.13	06	TUE	AUG
04	280	SM	R	024197	531	A	93	-	7,285	8.57	52.38	4.49	08	MON	MAY	+	8,318	9.53	53.79	5.13	06	WED	MAY
04	280	SM	R	026042	223	B	93	+	9,841	8.19	58.61	4.80	08	TUE	MAY	-	9,773	9.27	51.42	4.77	06	THU	AUG
04	280	SF	R	000000	112	A	93	+	6,986	8.10	68.12	5.52	08	WED	FEB	-	6,960	8.94	61.45	5.49	06	TUE	AUG

I-880
SR 85

N/O I-880

E/O SR 85

Milepost	Description	Peak Hour	ADT Pk. Mo.	ADT Annual
3.44	Scott Valley Road Interchange			
5.45	Granite Creek Road Interchange	5,500	62,000	52,000
		6,100	55,000	49,000
5.99	End Freeway			
12.55 =0.00	**Santa Cruz County** **Santa Clara County**			
		7,100	64,000	57,000
0.11	Jct. Rte. 35 Northwest			
		5,900	67,000	58,000
		5,500	67,000	58,000
1.25	Redwood Drive			
		7,500	68,000	60,000
		7,800	70,000	62,000
4.06	Bear Creek Road			
		7,900	73,000	67,000
6.07	Begin Freeway			
6.16	Los Gatos, Santa Cruz Avenue	5,500	80,000	70,000
7.07	Los Gatos, Jct. Rte. 9 West, Saratoga Avenue Interchange	5,000	69,000	63,000
8.89	Los Gatos, Lark Avenue Interchange	7,100	97,000	91,000
		7,900	110,000	99,000
9.35	Los Gatos, Jct. Rte. 85			
10.50	Campbell, Camden Avenue Interchange	9,600	135,000	122,000
12.34	Campbell, Hamilton Avenue Interchange	11,500	152,000	137,000
G13.94	Jct. Rte. 280 and 880 Interchange	13,700	188,000	174,000

ROUTE 18. **Route 30 in San Bernardino to Route 138 Near Pearblossom**

DISTRICT 8

San Bernardino County

Milepost	Description	Peak Hour	ADT Pk. Mo.	ADT Annual
T6.18	San Bernardino, Jct. Rte. 30			
		2,950	28,500	27,000
T7.12	San Bernardino, Parkdale Drive	2,800	27,000	25,500
		2,650	25,500	24,000
T7.55	San Bernardino, 40th Street			
		2,000	21,200	20,000
T8.26	San Bernardino, Sierra Way			
T8.36 =8.40	Milepost Equation			
		1,900	20,100	19,000
9.15	Waterman Canyon Road, South Junction			
9.22 =R9.23	Milepost Equation			
		1,800	19,100	18,000
R13.29	Waterman Canyon Road Interchange			
R17.30 =R17.54	Milepost Equation			
		1,650	17,500	16,500
R17.73	Jct. Rte. 138 North, Crestline Interchange			
R17.87 =17.88	Milepost Equation			
		1,100	11,100	10,500
20.61	Jct. Rte. 189 North (to Twin Peaks)			
		1,250	12,100	11,500
		1,250	11,500	11,000
23.38	Daley Canyon Road			
24.71	Jct. Rte. 173 North (to Lake Arrowhead)	1,150	10,400	10,000
		1,100	9,300	8,900
		1,000	8,200	7,900
25.81	Kuffel Canyon Road			
31.65	Running Springs, West Jct. Rte. 330	900	7,100	6,900
31.90	Running Springs, East Jct. Rte. 330 South	960	8,800	8,000
		1,350	13,800	12,000
		1,200	11,500	10,000
34.52	Green Valley Lake Road			
		1,150	10,400	9,000
44.32	Big Bear Dam, Jct. Rte. 38 West	700	5,800	5,000
		1,200	10,000	8,700
		1,400	11,400	10,000
46.55	Big Bear Lake, Blue Jay Road			
48.07	Big Bear Lake, Mill Creek Road	1,550	12,500	11,000
		1,700	13,600	12,000
48.36	Lakeview Drive			
		1,950	15,800	14,000
49.11	Big Bear Lake, Big Bear Boulevard at Pine Knot Avenue	2,250	18,000	16,000
		2,500	20,100	18,000
		2,500	20,000	18,000
50.82	Moonridge Road			

Milepost	Description	Peak Hour	ADT	
			Pk. Mo.	Annual
R1.99	San Jose, Jct. Rte. 82, 1st Street Interchange			
		21,500	228,000	215,000
R2.52	San Jose, Jct. Rte. 87			
		23,100	243,000	231,000
R2.88	San Jose, Bird Avenue Interchange			
		23,100	243,000	231,000
R3.76	Race Street Interchange			
		20,900	218,000	209,000
R3.88	Southwest Expressway Interchange			
		19,000	198,000	190,000
R3.99	Meridian Road Interchange			
R4.50	San Jose, Leigh Avenue Interchange	18,400	192,000	184,000
L4.66	San Jose, Leland Avenue Interchange			
L5.41	San Jose, Jct. Rte. 17, Jct. Rte. 880	18,500	212,000	205,000
L5.95 =4.57	San Jose, Winchester Boulevard Interchange (Santa Clara/Los Gatos Roads)	18,300	230,000	212,000
5.95	San Jose, Saratoga Avenue Interchange	20,200	272,000	233,000
7.12	San Jose, Lawrence Expressway	17,700	226,000	197,000
7.39	San Jose, Stevens Creek Boulevard	14,500	153,000	161,000
		18,500	208,000	185,000
8.38	Cupertino, Wolfe Road			
9.43	Saratoga, Jct. Rte. 85, De Anza Boulevard	17,200	194,000	172,000
		16,000	179,000	159,000
10.74	Sunnyvale, Jct. Rte. 85			
11.45	Cupertino, Foothill Boulevard Interchange	10,000	123,000	111,000
		9,600	105,000	96,000
14.10	Magdalena Avenue			
15.05	Los Altos Hills, El Monte Avenue Interchange	11,200	104,000	97,000
		10,500	98,000	91,000
18.38	Page Mill Road Interchange			
		8,800	90,000	84,000
20.61	Alpine Road Interchange			
		8,500	83,000	77,000
20.63 =R0.00	**Santa Clara County San Mateo County**			

Milepost	Description	Peak Hour	ADT	
			Pk. Mo.	Annual
20.63 =R0.00	**Santa Clara County San Mateo County**			
		8,500	83,000	77,000
R1.61	Sand Hill Road Interchange			
		9,800	87,000	82,000
R3.34	Jct. Rte. 84			
R4.65	Farm Hill Boulevard Interchange	9,900	85,000	81,000
		10,400	89,000	83,000
R6.61	Canada Road Interchange			
R7.08 =6.54	Milepost Equation			
		9,500	84,000	81,000
6.65	Edgewood Road Interchange			
		9,500	88,000	83,000
10.82	Jct. Rte. 92			
R12.32	Jct. Rte. 35, Bunker Hill Drive Interchange	10,000	86,000	81,000
		9,600	92,000	86,000
R13.55	Northbound Access to Crystal Springs Safety Roadside Rest Area			
		9,600	92,000	86,000
R14.22	Hayne Road Interchange			
R17.16	Hillsborough, Trousdale Drive Interchange	8,500	90,000	85,000
R17.92	Millbrae, Hillcrest Boulevard Interchange	9,100	95,000	91,000
R18.52	Millbrae, Larkspur Drive Interchange	8,600	90,000	86,000
R19.28	San Bruno, Jct. Rte 35 North	10,700	101,000	97,000
R20.22	San Bruno, Whitman Way/ Jenevein Avenue	9,900	87,000	85,000
R20.75	San Bruno, San Bruno Avenue Interchange	11,500	102,000	96,000
R21.02	San Bruno, Jct. Rte. 380 East	10,400	92,000	87,000
R21.31	San Bruno, Sneath Lane Interchange	19,300	168,000	160,000
R22.04	South San Francisco, Avalon Drive Interchange	18,400	192,000	183,000
R22.62	South San Francisco, Westborough Boulevard Interchange	18,300	173,000	166,000
R24.20	Daly City, Hickey Boulevard Interchange	17,700	168,000	166,000
R24.63	Daly City, Collins Avenue Interchange (Serramonte Boulevard)	15,500	169,000	162,000
R25.28	Daly City, Jct. Rte. 1 South	19,500	205,000	196,000

Milepost	Description	Peak Hour	ADT Pk. Mo.	ADT Annual
8.85	Jct. Rte. 54, Sweetwater Road Interchange			
10.28	National City, Plaza Boulevard Interchange	14,000	[illegible]	[illegible]
		15,800	[illegible]	180,000
11.31	San Diego, Jct. Rte. 252			
12.34	San Diego, Imperial Avenue Interchange	16,500	137,000	134,000
12.95	San Diego, Market Street Interchange	16,100	[illegible]	180,000
		17,100	[illegible]	[illegible]
13.51	San Diego, Jct. Rte. 94			
13.95	San Diego, Home Avenue/Federal Boulevard Interchange	14,800	[illegible]	[illegible]
		16,500	[illegible]	[illegible]
14.64	San Diego, Jct. Rte. 15			
15.95	San Diego, University Avenue Interchange	17,300	203,000	197,000
16.43	San Diego, El Cajon Boulevard Interchange	20,000	[illegible]	191,000
16.99	San Diego, Adams Avenue Interchange	19,300	[illegible]	[illegible]
		20,100	207,000	199,000
17.65	San Diego, Jct. Rte. 8			
		18,100	[illegible]	194,000
18.89	Murray Ridge Interchange			
20.23	San Diego, Kearny Villa Road Interchange	[illegible]	[illegible]	[illegible]
		15,200	[illegible]	163,000
20.60	San Diego, Jct. Rte. 163			
21.65	San Diego, Jct. Rte. 274	14,900	176,000	160,000
22.56	San Diego, Clairemont Mesa Drive Interchange	14,900	176,000	160,000
		13,600	157,000	153,000
23.65	San Diego, Jct. Rte. 52			
24.44	San Diego, Governor Drive Interchange	13,600	158,000	153,000
25.94	San Diego, Miramar Road Interchange	13,000	151,000	146,000
27.07	San Diego, Mira Mesa Boulevard Interchange	11,900	138,000	134,000
28.50	San Diego, Jct. Rte. 5	9,300	121,000	107,000

ROUTE 880. **Route 280 in San Jose to Route 980 in Oakland**

DISTRICT 4

Santa Clara County

Milepost	Description	Peak Hour	ADT Pk. Mo.	ADT Annual
0.00	Jct. Rte. 280, Stevens Creek Boulevard Interchange			
1.25	San Jose, Bascom Avenue Interchange	12,200	149,000	141,000
2.08	San Jose, Jct. Rte. 82, Alameda Interchange	12,300	147,000	136,000
2.73	San Jose, Coleman Avenue Interchange	12,300	148,000	136,000
3.57	San Jose, North First Street Interchange	12,200	144,000	129,000
		12,000	141,000	126,000
4.08	San Jose, Jct. Rte. 101			
4.28	San Jose, Old Bayshore Highway Interchange	12,800	131,000	117,000
		11,600	118,000	105,000
5.34	Coyote Creek Interchange			
6.71	Trimble Road Interchange, Montague Expressway	10,500	106,000	95,000
		11,100	113,000	101,000
8.42	Jct. Rte. 237			
		13,000	136,000	123,000
10.41	Dixon Road Interchange			
		11,700	125,000	117,000
10.50 =R0.00	**Santa Clara County** **Alameda County** (Fremont, South City Limits)			
R1.95 =2.22	Milepost Equation			
		11,700	128,000	117,000
2.28	Fremont, Jct. Rte. 262 East			
3.25	Fremont, Landing Road/ Fremont Boulevard Interchange	10,100	127,000	117,000
4.71	Fremont, Durham Road/ Grimmer Boulevard Interchange	11,800	130,000	119,000
6.24	Fremont, Stevenson Boulevard Interchange	15,300	153,000	138,000
7.18	Fremont, Mowry Avenue Interchange	16,000	162,000	146,000
8.84	Fremont, South Jct. Rte. 84, Thornton Avenue Interchange	17,200	172,000	156,000
10.30	Fremont, North Jct. Rte. 84, Decoto Road Interchange	16,700	173,000	158,000
11.40	Fremont, Fremont Boulevard Interchange	14,200	164,000	150,000

Freeway Segment Volumes

			Background						Valley Fair						Town & Country					
			Mixed-Flow		HOV		% HOV		Total		Mixed-Flow		HOV		Total		Mixed-Flow		HOV	
Freeway	Segment	Direction	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
I-280	Lawerance to Saratoga	SB	6957	7421	457	770	0.06	0.09	5	18	5	16	0	2	55	124	52	112	3	12
I-280	Saratoga to Winchester	SB	7156	7252	396	638	0.05	0.08	5	18	5	17	0	1	55	124	52	114	3	10
I-280	Winchester to I-880	SB	4251	4284	336	564	0.07	0.12	0	0	0	0	0	0	0	0	0	0	0	0
I-280	I-880 to Bascom	SB	6877	7166	476	663	0.06	0.08	5	32	5	29	0	3	69	73	65	67	4	6
I-280	Bascom to Meridian	SB	7356	7829	0	0	0.00	0.00	5	32	5	32	0	0	69	73	69	73	0	0
I-280	Meridian to Bascom	NB	7713	7270	0	0	0.00	0.00	9	32	9	32	0	0	40	97	40	97	0	0
I-280	Bascom to I-880	NB	8435	7894	439	506	0.05	0.06	9	32	9	30	0	2	40	97	38	91	2	6
I-280	I-880 to Winchester	NB	5572	5059	465	580	0.08	0.10	0	0	0	0	0	0	0	0	0	0	0	0
I-280	Winchester to Saratoga	NB	7531	7206	488	518	0.06	0.07	3	18	3	17	0	1	108	83	101	77	7	6
I-280	Saratoga to Lawarence	NB	7040	6717	465	500	0.06	0.07	3	18	3	17	0	1	108	83	101	77	7	6
I-880	Bascom to Stevens Creek	SB	4970	7576	0	0	0.00	0.00	6	26	6	26	0	0	87	96	87	96	0	0
I-880	Stevens Creek to I-280	SB	3449	6109	0	0	0.00	0.00	3	17	3	17	0	0	25	31	25	31	0	0
SR 17	I-280 to Hamilton	SB	5233	8508	0	0	0.00	0.00	3	17	3	17	0	0	25	31	25	31	0	0
SR 17	Hamilton to I-280	NB	7520	5330	0	0	0.00	0.00	5	17	5	17	0	0	16	39	16	39	0	0
I-880	I-280 to Stevens Creek	NB	5997	3626	0	0	0.00	0.00	5	17	5	17	0	0	16	39	16	39	0	0
I-880	Stevens Creek to Bascom	NB	6888	5095	0	0	0.00	0.00	4	26	4	26	0	0	171	131	171	131	0	0

			Background Plus Valley Fair						Background Plus Town & Country						Background Plus Town & Country &Valley Fair					
			Total		Mixed-Flow		HOV		Total		Mixed-Flow		HOV		Total		Mixed-Flow		HOV	
Freeway	Segment	Direction	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
I-280	Lawerance to Saratoga	SB	7419	8209	6962	7439	457	772	7469	8315	7009	7533	460	782	7474	8333	7013	7550	461	783
I-280	Saratoga to Winchester	SB	7557	7908	7161	7270	396	639	7607	8014	7208	7366	399	648	7612	8032	7213	7383	399	649
I-280	Winchester to I-880	SB	4587	4848	4251	4284	336	564	4587	4848	4251	4284	336	564	4587	4848	4251	4284	336	564
I-280	I-880 to Bascom	SB	7358	7861	6882	7198	476	666	7422	7902	6942	7233	480	669	7427	7934	6946	7262	481	672
I-280	Bascom to Meridian	SB	7361	7861	7361	7861	0	0	7425	7902	7425	7902	0	0	7430	7934	7430	7934	0	0
I-280	Meridian to Bascom	NB	7722	7302	7722	7302	0	0	7753	7367	7753	7367	0	0	7762	7399	7762	7399	0	0
I-280	Bascom to I-880	NB	8883	8432	8444	7926	439	508	8914	8497	8473	7985	441	512	8923	8529	8482	8015	441	514
I-280	I-880 to Winchester	NB	6037	5639	5572	5059	465	580	6037	5639	5572	5059	465	580	6037	5639	5572	5059	465	580
I-280	Winchester to Saratoga	NB	8022	7742	7534	7224	488	519	8127	7807	7632	7283	495	524	8130	7825	7635	7300	495	525
I-280	Saratoga to Lawarence	NB	7508	7235	7043	6735	465	501	7613	7300	7141	6794	472	506	7616	7318	7144	6811	472	507
I-880	Bascom to Stevens Creek	SB	4976	7602	4976	7602	0	0	5057	7672	5057	7672	0	0	5063	7698	5063	7698	0	0
I-880	Stevens Creek to I-280	SB	3452	6126	3452	6126	0	0	3474	6140	3474	6140	0	0	3477	6157	3477	6157	0	0
SR 17	I-280 to Hamilton	SB	5236	8525	5236	8525	0	0	5258	8539	5258	8539	0	0	5261	8556	5261	8556	0	0
SR 17	Hamilton to I-280	NB	7525	5347	7525	5347	0	0	7536	5369	7536	5369	0	0	7541	5386	7541	5386	0	0
I-880	I-280 to Stevens Creek	NB	6002	3643	6002	3643	0	0	6013	3665	6013	3665	0	0	6018	3682	6018	3682	0	0
I-880	Stevens Creek to Bascom	NB	6892	5121	6892	5121	0	0	7059	5226	7059	5226	0	0	7063	5252	7063	5252	0	0

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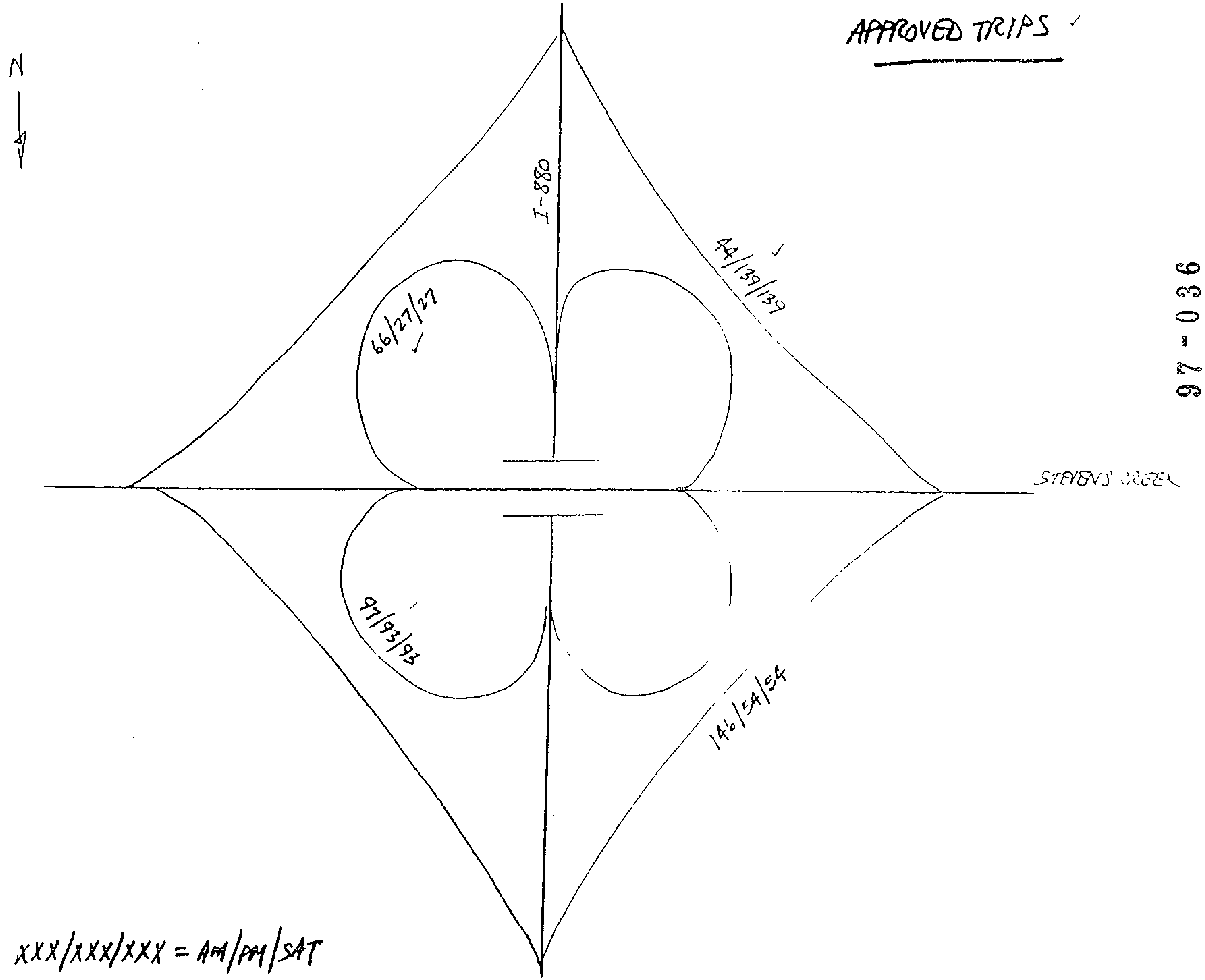
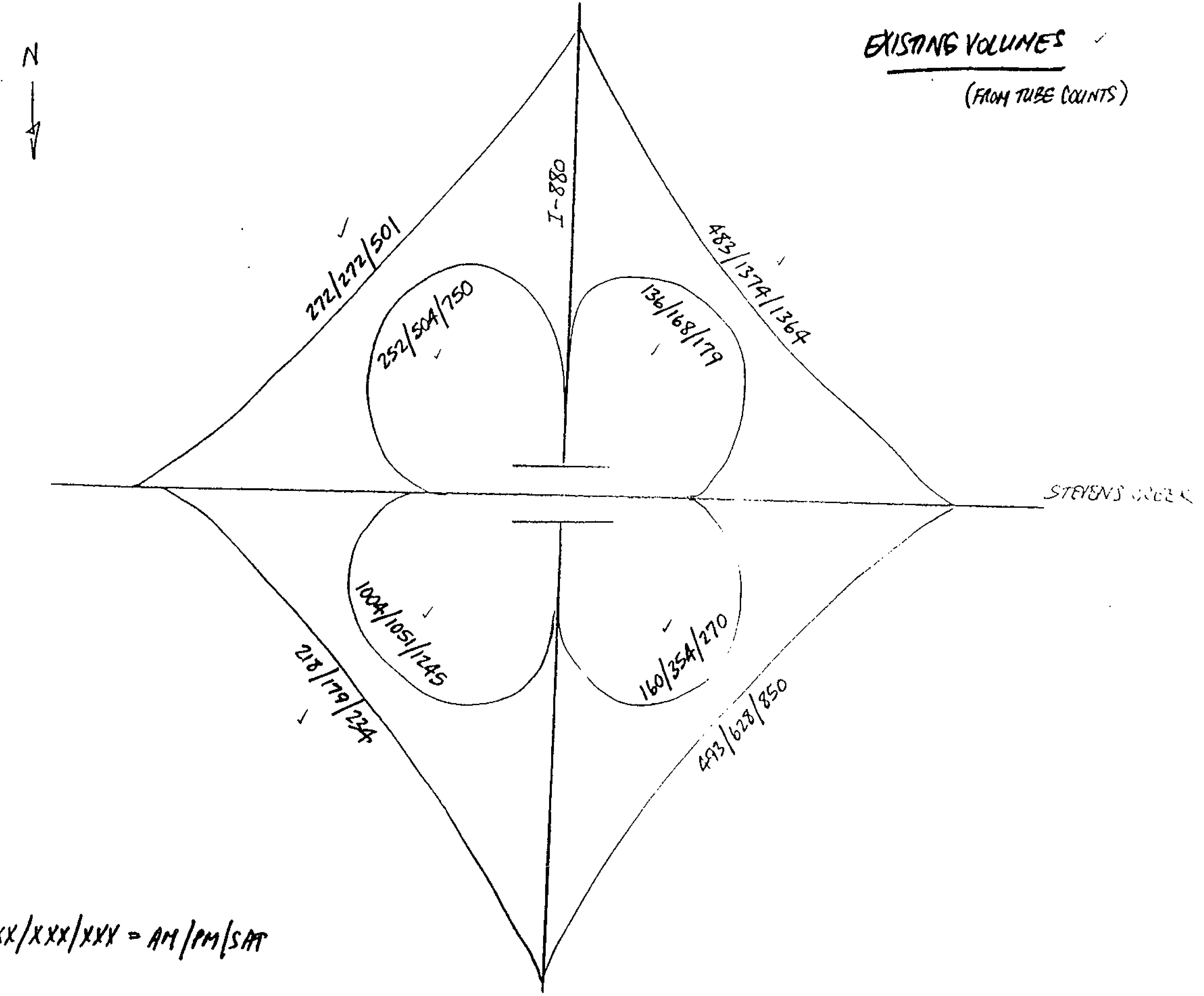
APPROVED TRIPS ✓



XXX/XXX/XXX = AM/PM/SAT

EXISTING VOLUMES

(FROM TUBE COUNTS)



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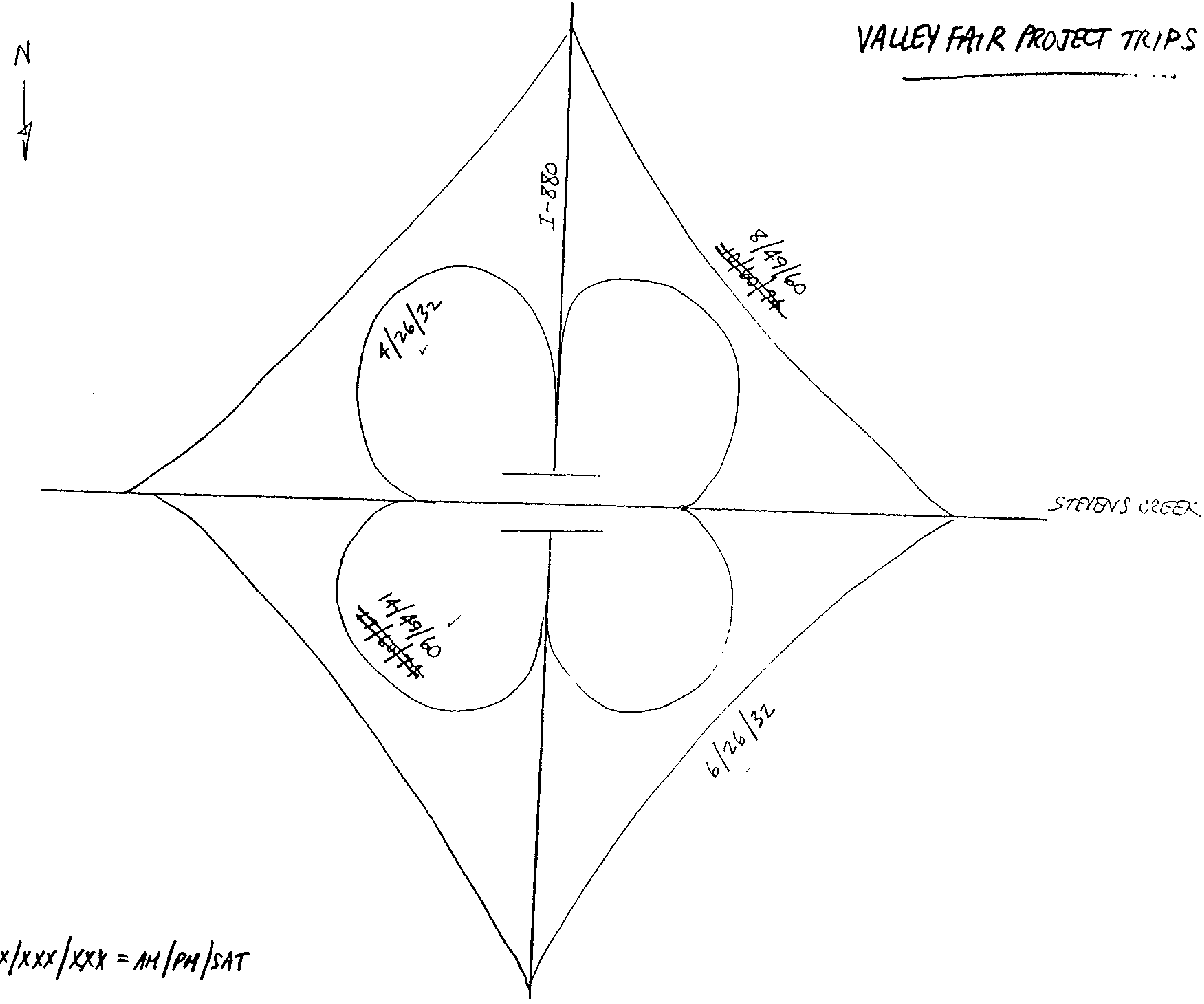
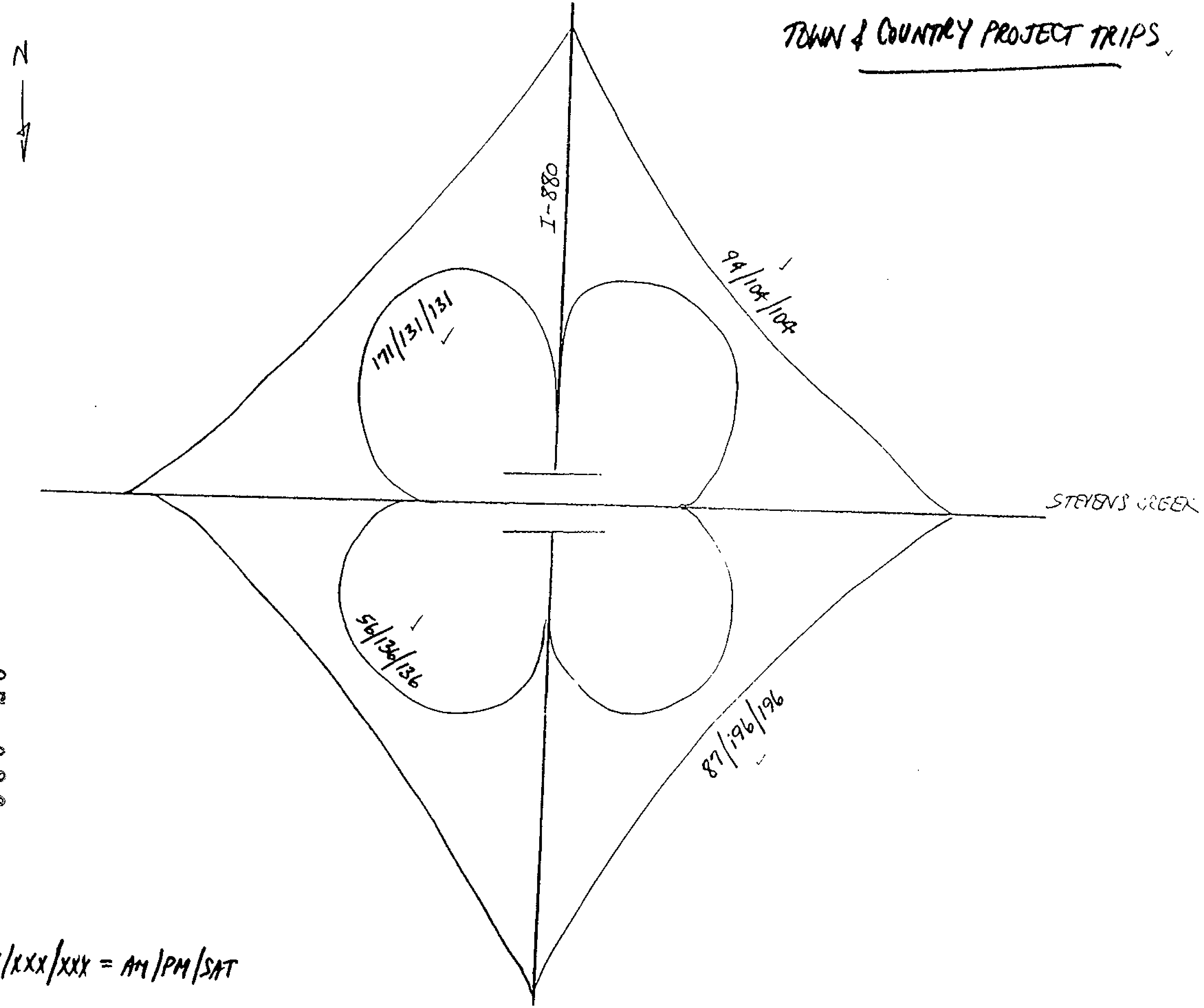
VALLEY FAIR PROJECT TRIPS



XXX/XXX/XXX = AM/PM/SAT

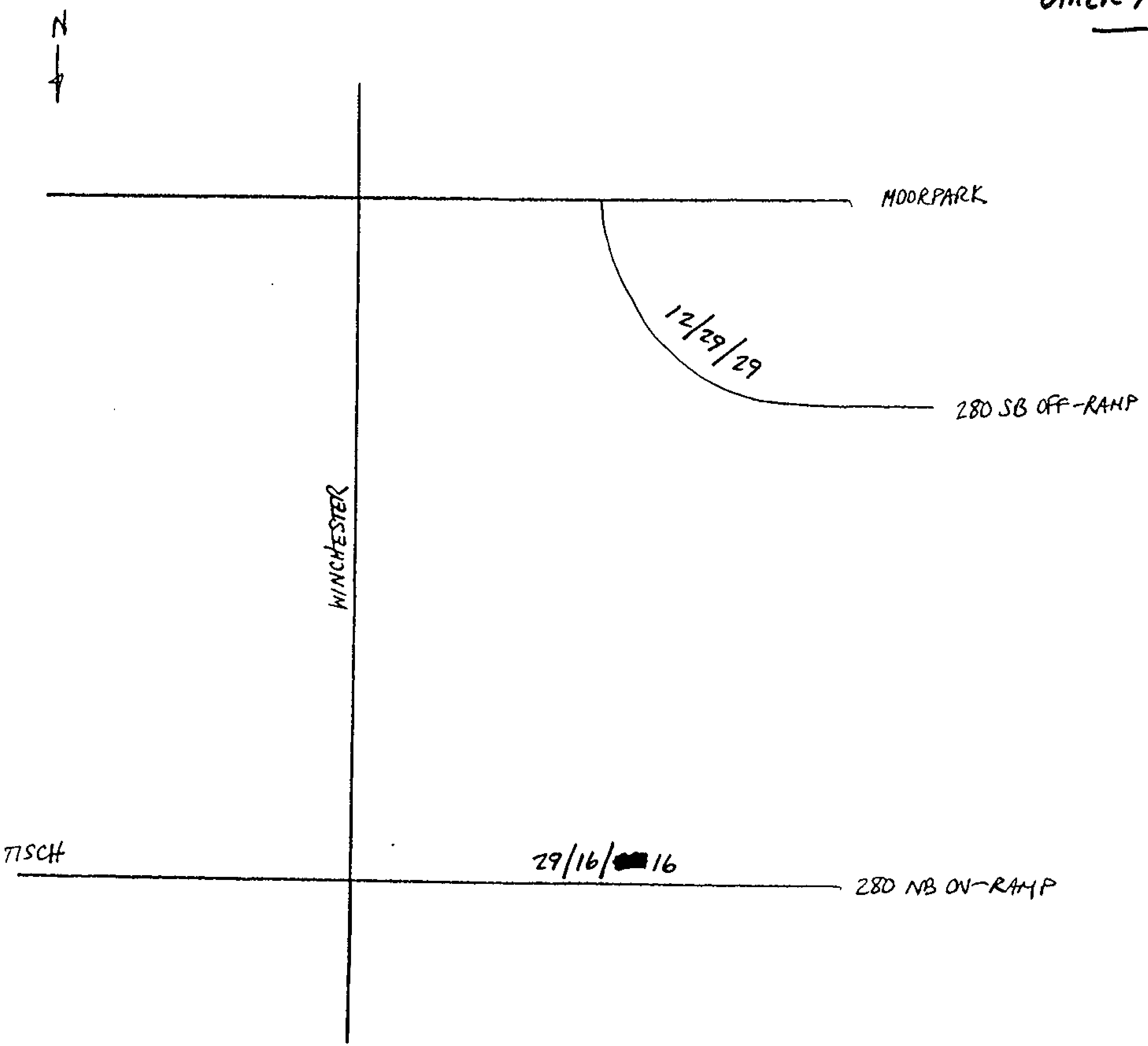
97-036

TOWN & COUNTRY PROJECT TRIPS



XXX/XXX/XXX = AM/PM/SAT

OTHER PARCELS TRIPS



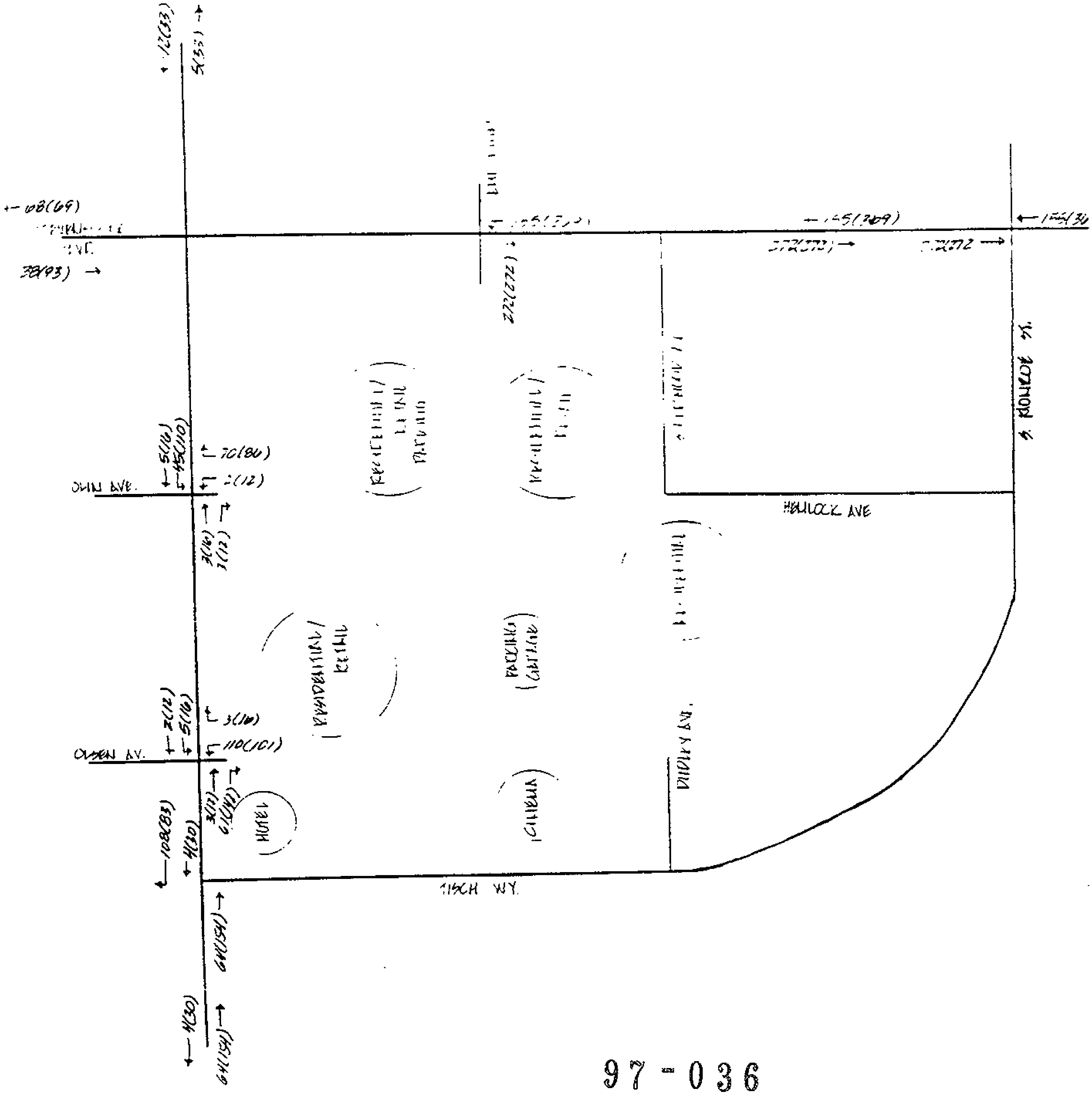
XXX/XXX/XXX = AM/PM/SAT

SAT ≅ PM

10/20/97

[illegible] TRIPS

[illegible] PARKING [illegible]

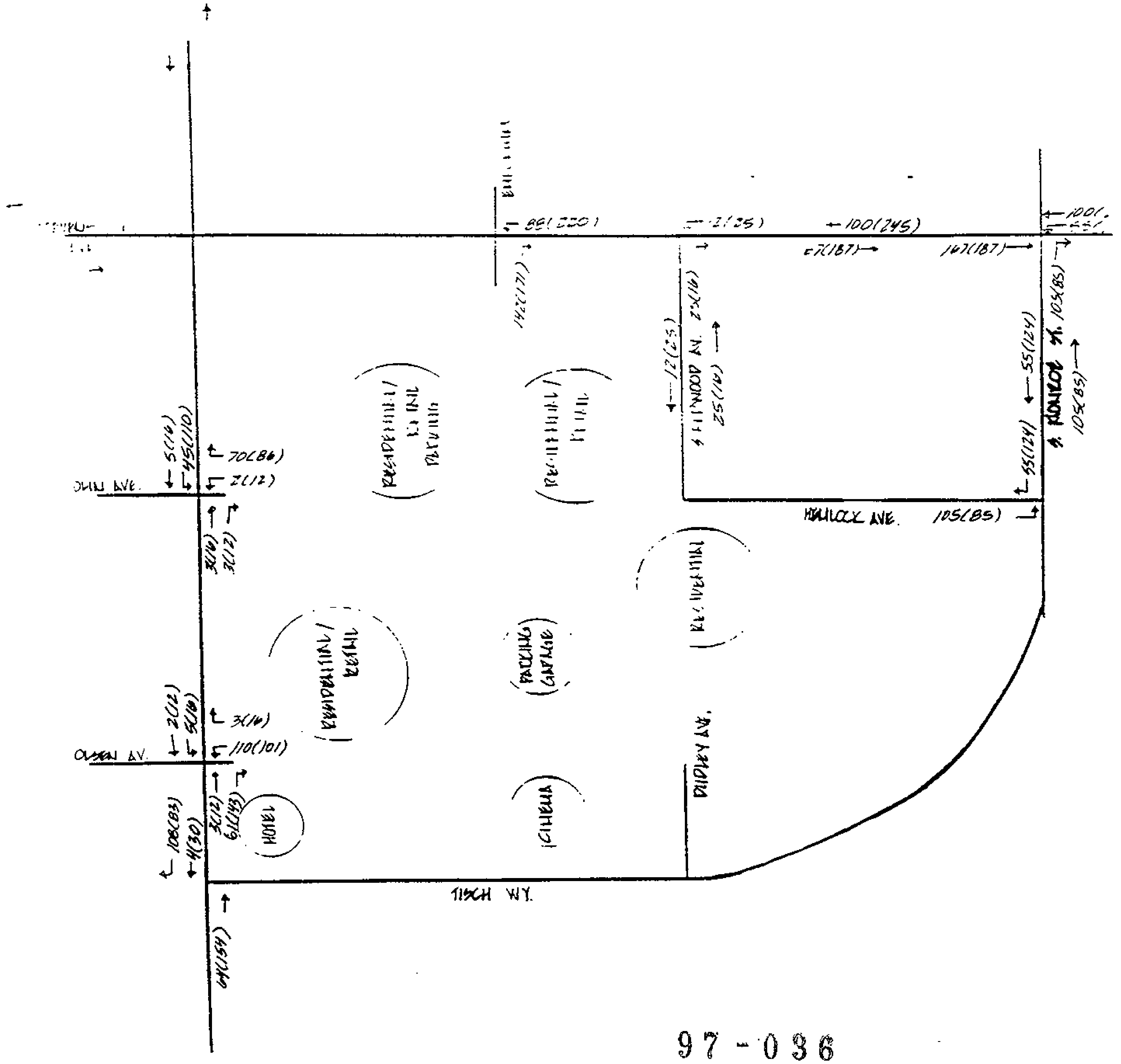


97-036

[illegible] AB [illegible]

ACCESS [illegible]

[illegible] TOTAL PROJECT [illegible]



97-036

2/20/97

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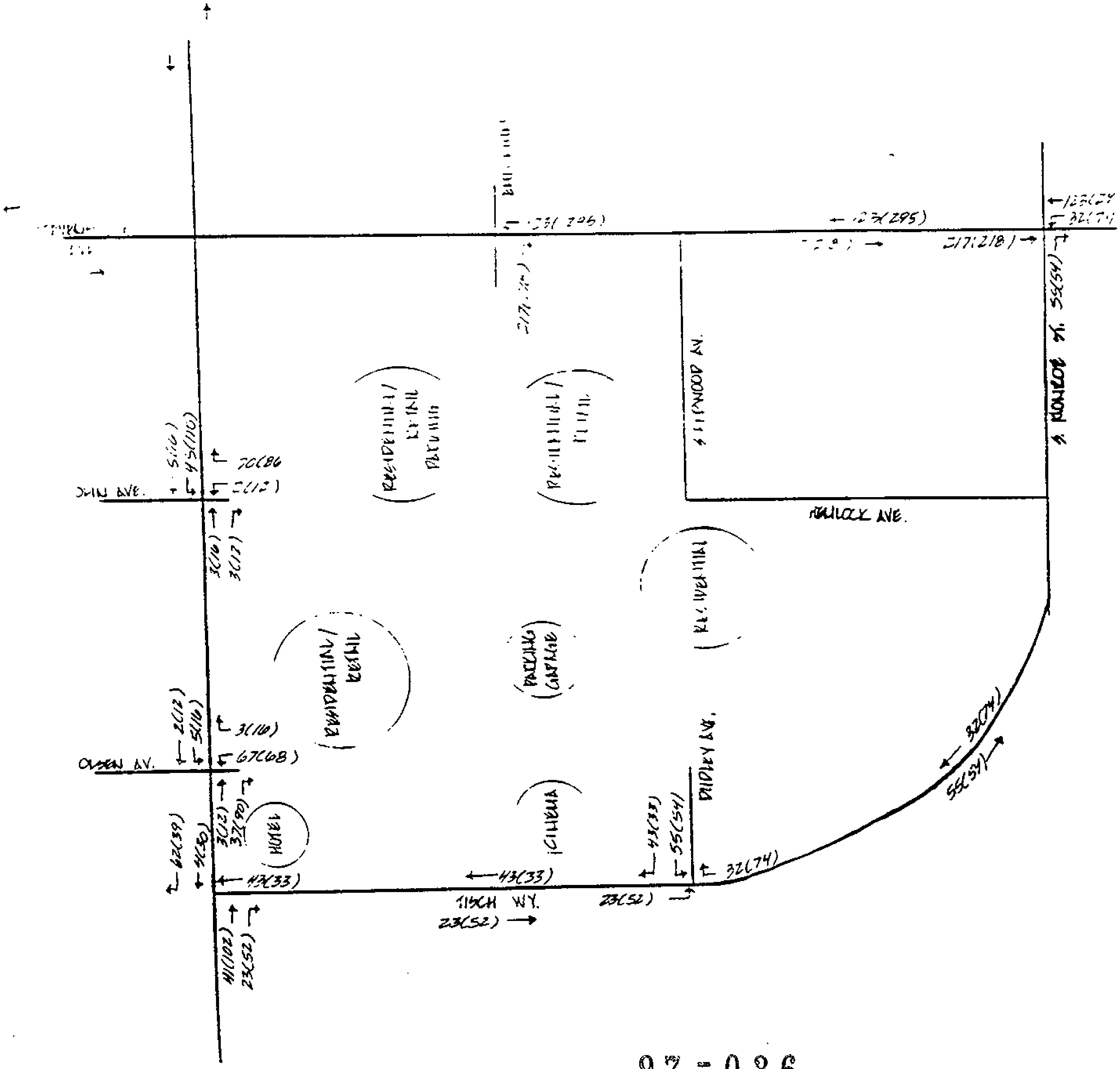
[illegible]

[illegible]


← 123(295)
217(218) →
←123(27
←32(74)
55(54)
MONROE ST.
ELLENWOOD AV.
HAVLOCK AVE.
OHIO AVE.
70(86
2(12)
5(10)
45(110)
3(10)
3(17)
PARKING GARAGE
OLSEN AV.
2(12)
5(10)
3(10)
67(68)
3(12)
37(90)
HOTEL
62(39)
4(30)
43(33)
41(102)
23(52)
TISCH WY.
43(33)
23(52) →
CINEMA
43(33)
55(54)
23(52)
DUDLEY AV.
32(74)
32(74)
55(54)

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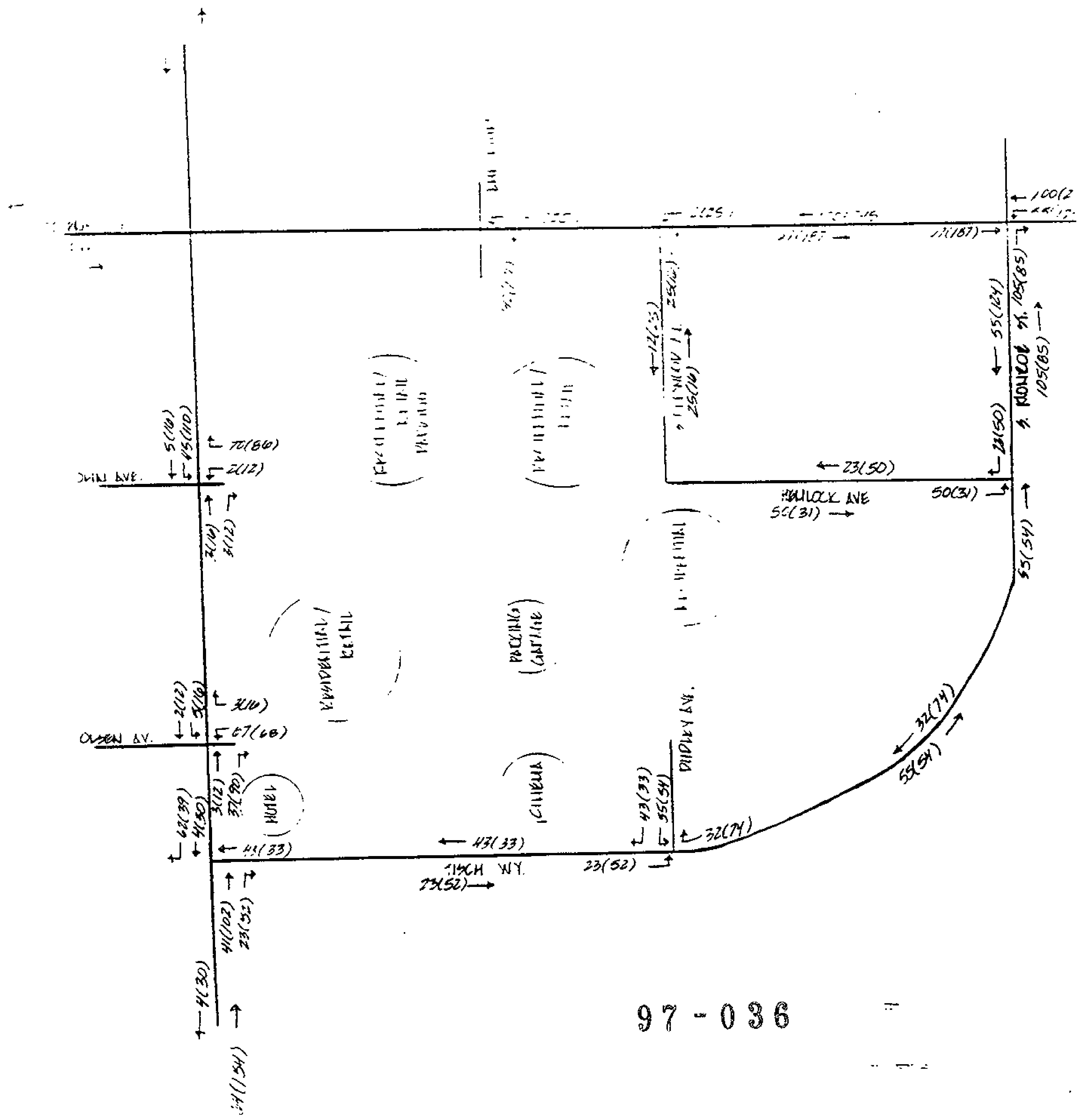
10/30/97

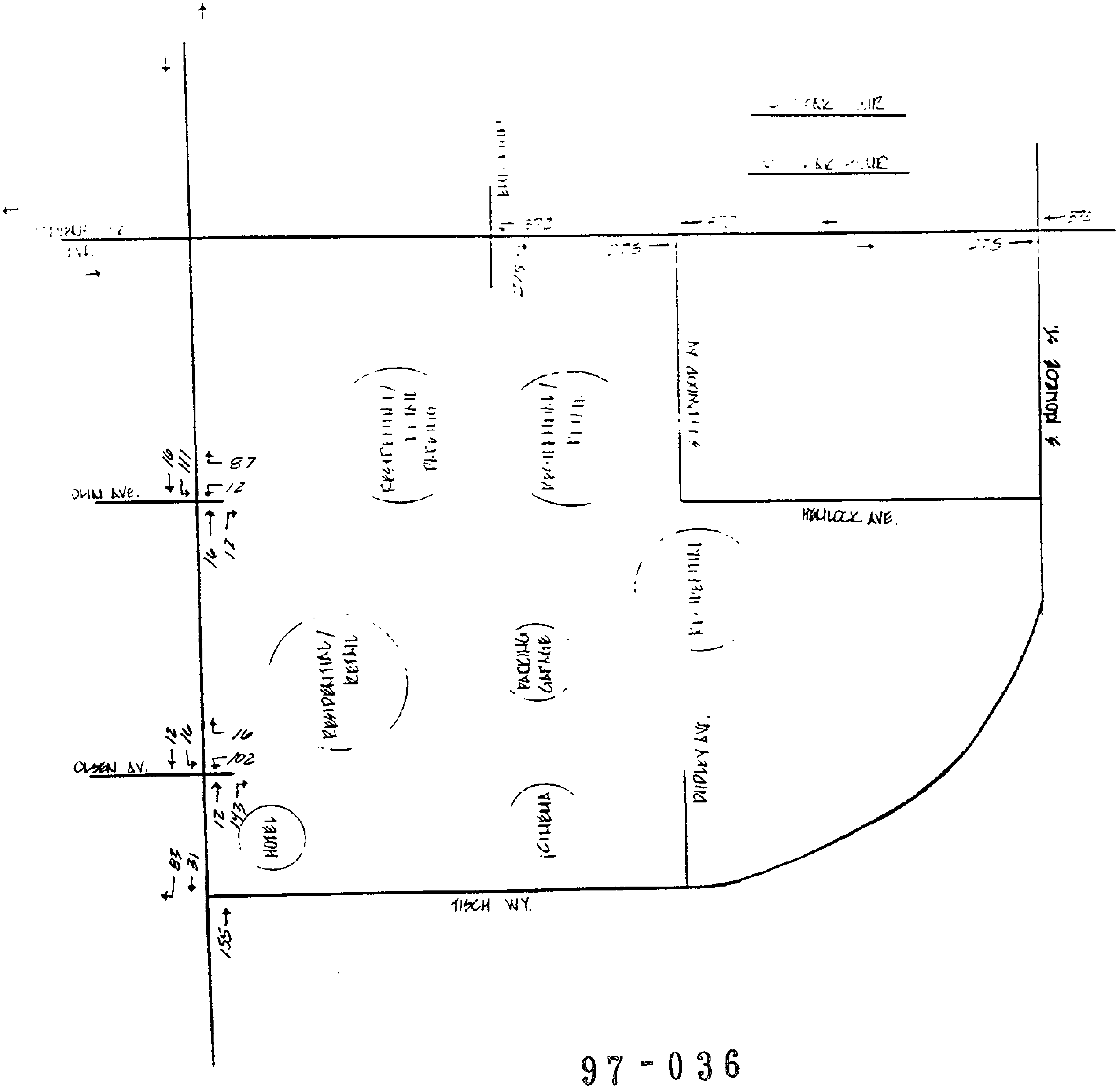
[illegible]

[illegible]



97-036

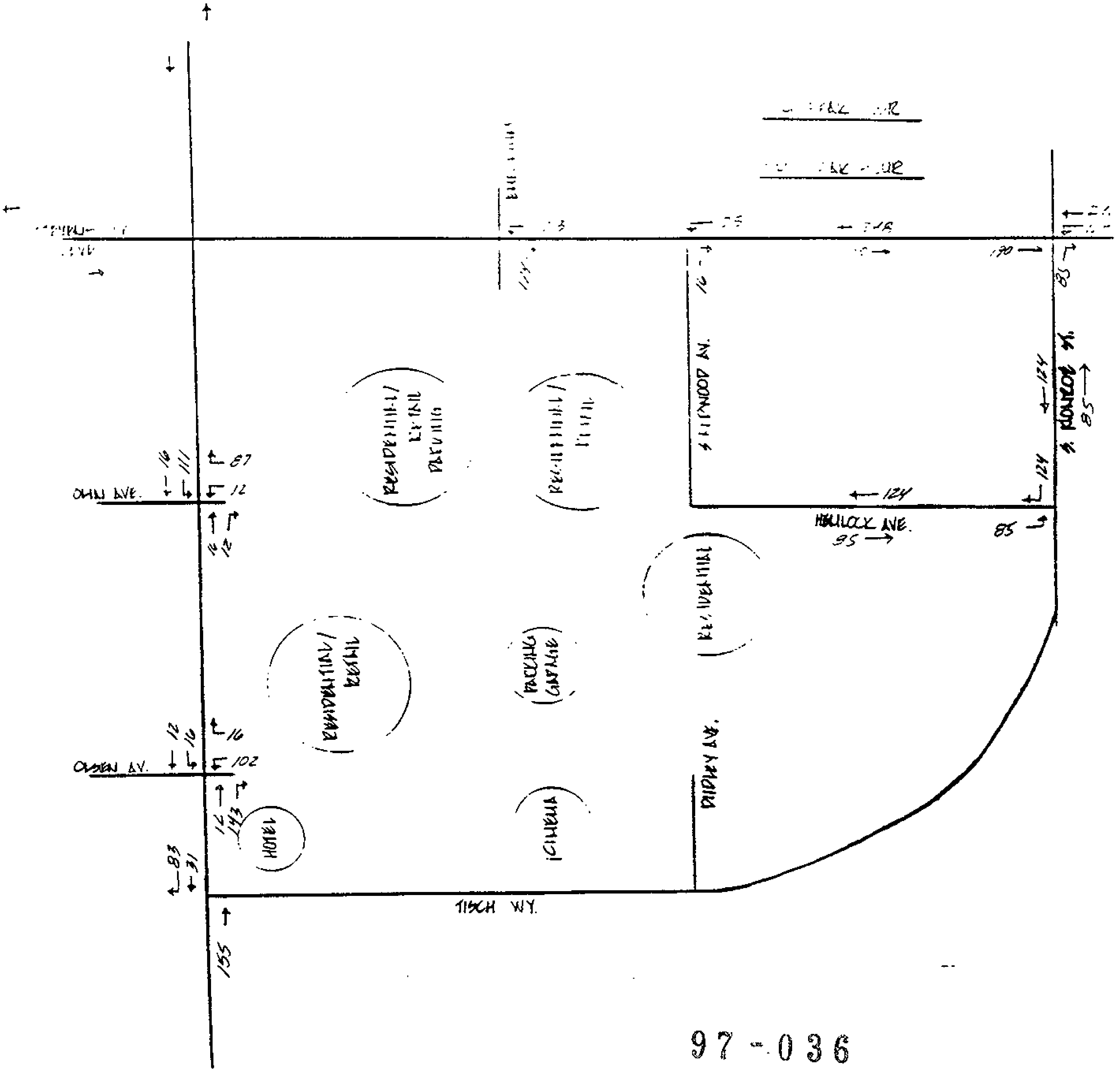
TOTAL PROJECT [illegible]
SATURDAY PEAK HOUR
[illegible]



97-036

10/21/97

TOTAL PROJECT TRIPS
SATURDAY PEAK HOUR
WITH ACCESS AT ELMWOOD [illegible]

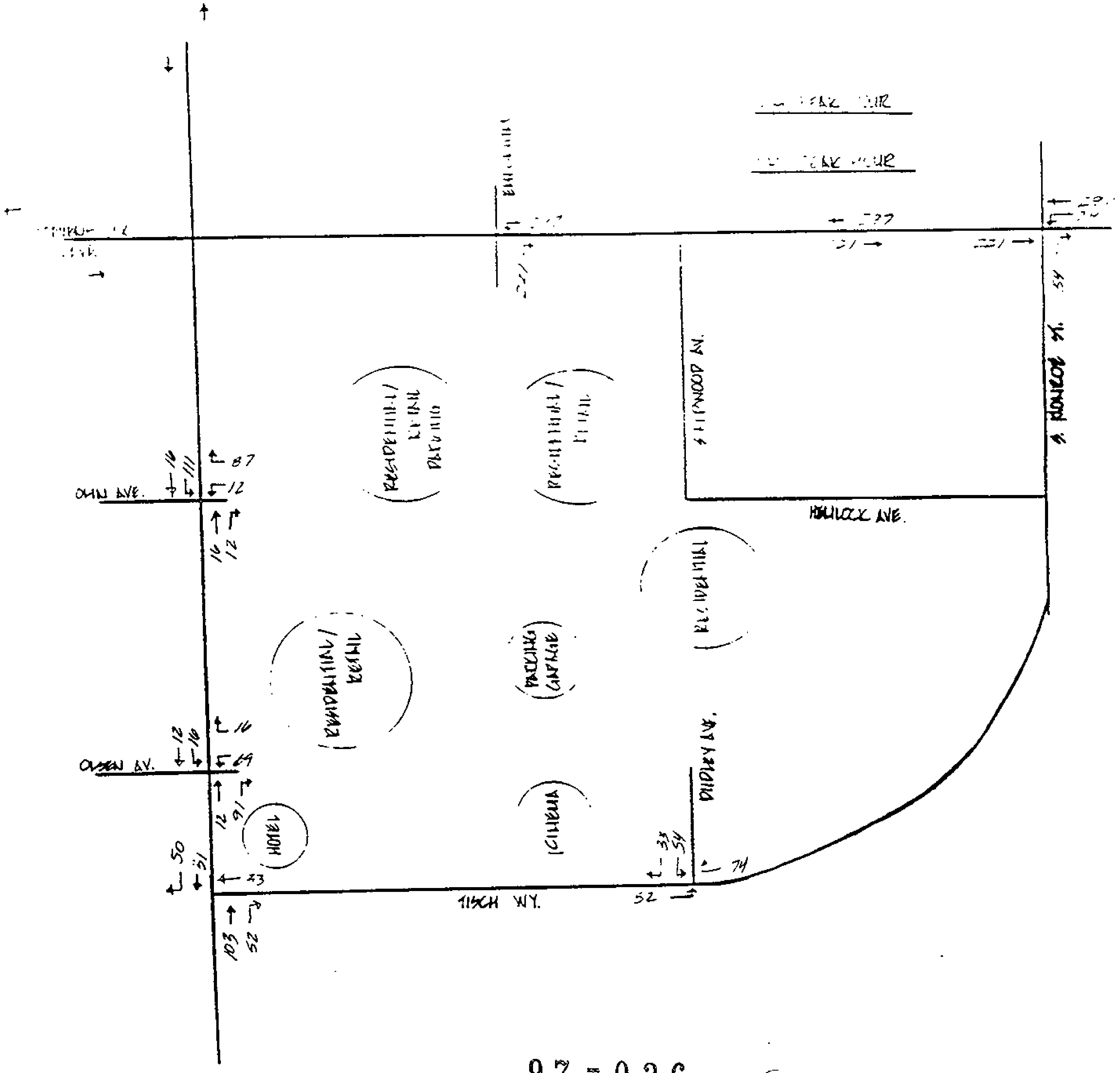


97-036

[illegible]

[illegible]

[illegible]



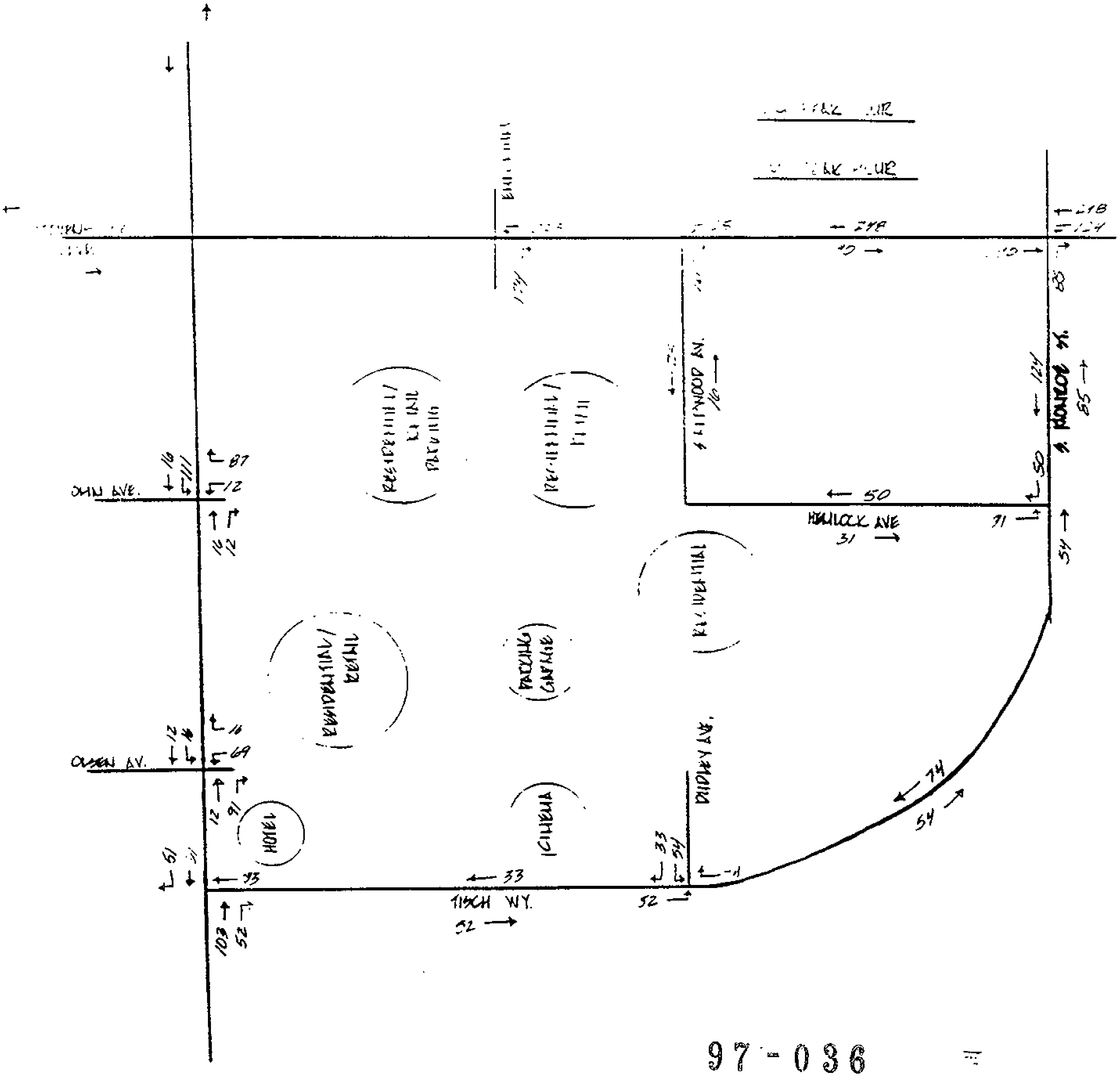
PEAK HOUR
PEAK HOUR
OLIN AVE.
OLSEN AV.
TISCH WY.
DUDLEY AV.
HALLOCK AVE.
ELLENWOOD AV.
HOLBROOK ST.
RESIDENTIAL/RETAIL/PARKING
RESIDENTIAL/RETAIL
RESIDENTIAL
PARKING GARAGE
RETAIL/RESIDENTIAL
CINEMA
HOTEL
87
16
111
12
16
12
16
12
16
69
12
91
50
51
23
103
52
52
33
54
74
222
221
221
54

97-036

[illegible]

[illegible]

[illegible]


PEAK HOUR
PEAK HOUR
OHN AVE.
OLSEN AV.
TISCH WY.
HEMLOCK AVE
DUDLEY AVE.
ELMWOOD AV.
MONROE ST.
RESIDENTIAL/RETAIL PARKING
RESIDENTIAL/RETAIL
RESIDENTIAL
RETAIL/RESIDENTIAL
PARKING GARAGE
CINEMA
HOTEL
← 248
40 →
← 50
31 →
← 33
52 →
74
54
85 →
124
87
12
16
111
69
93
103
52
51
91

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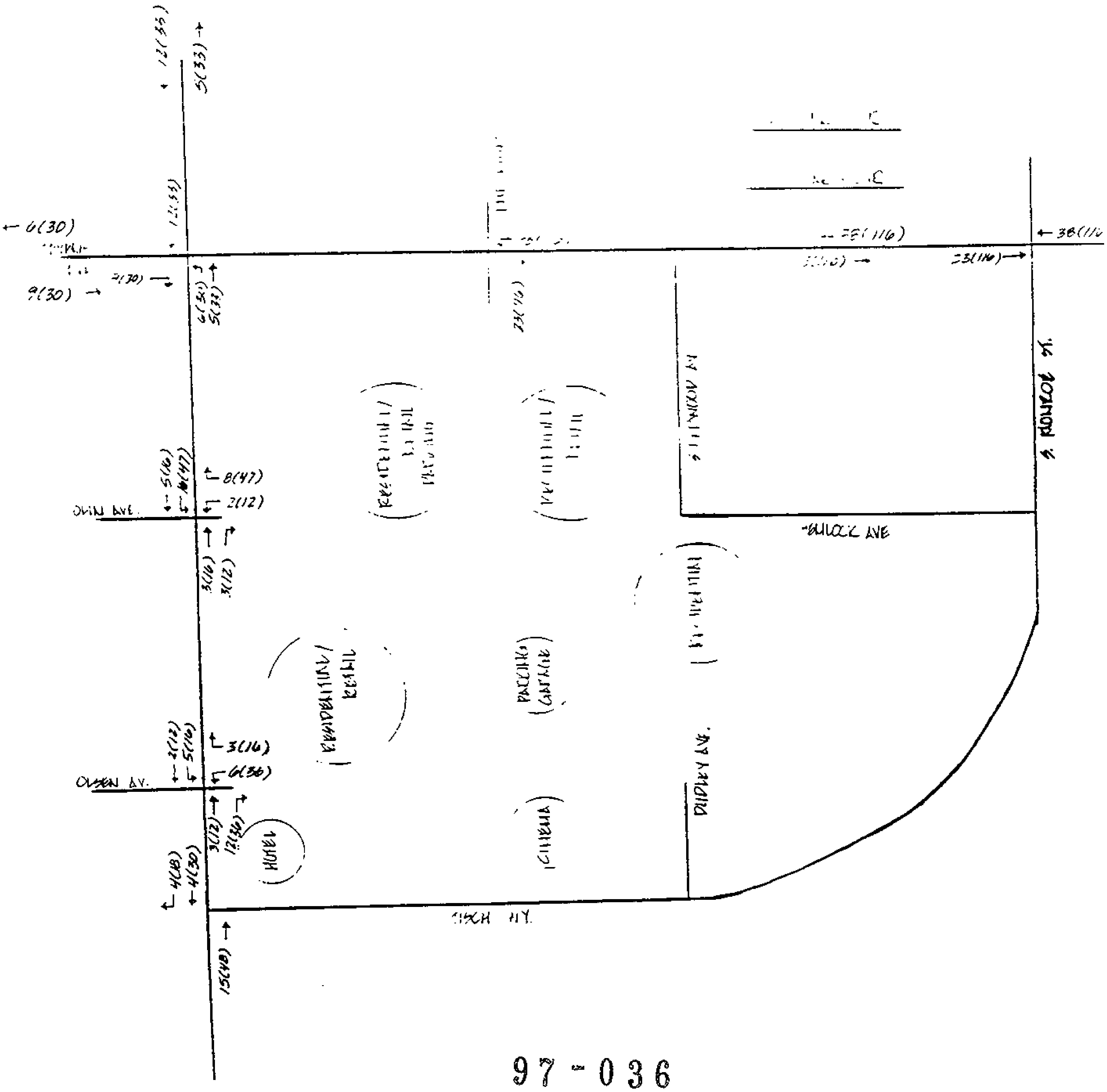
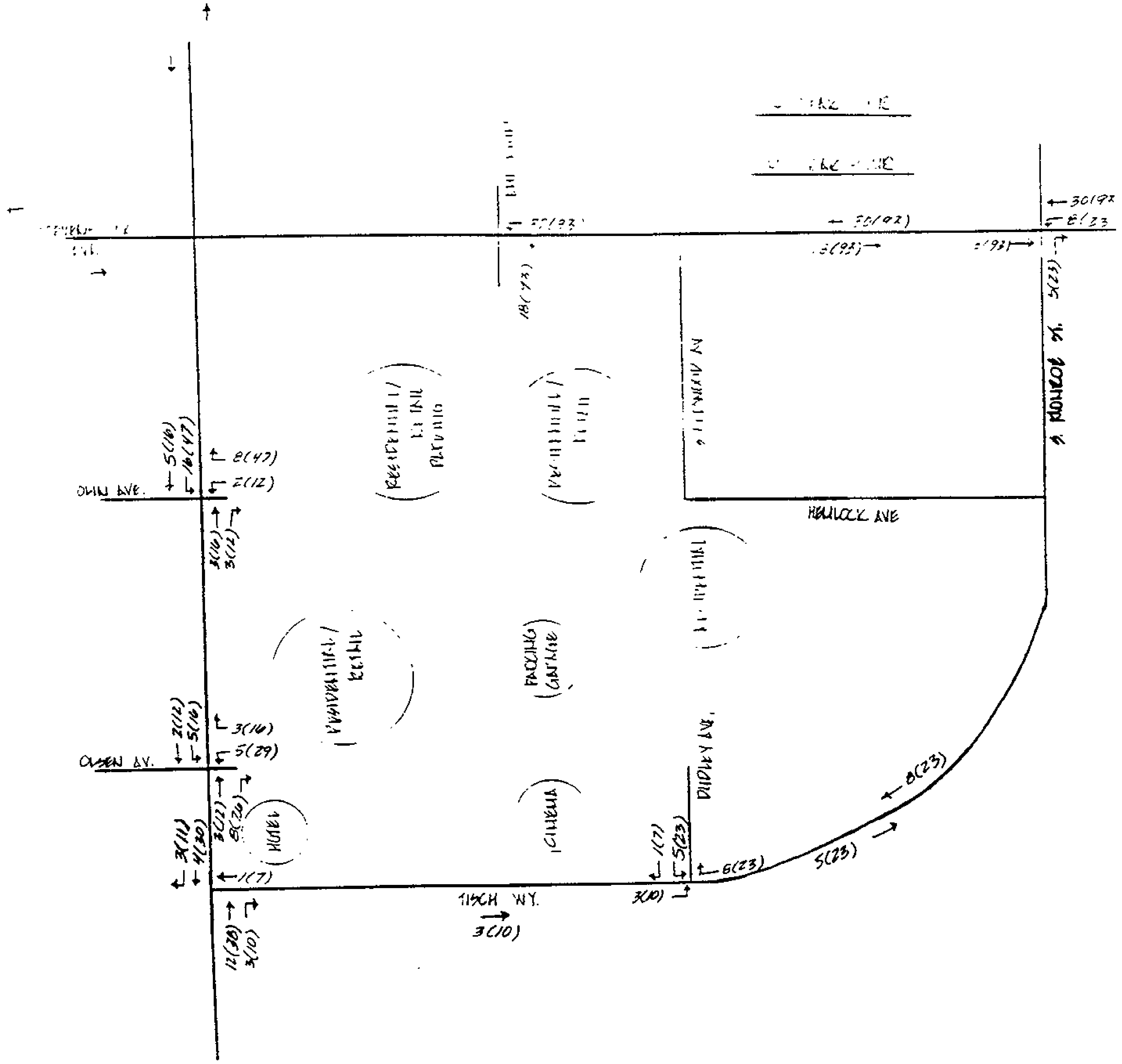
10/20/97



97-036

REVISED



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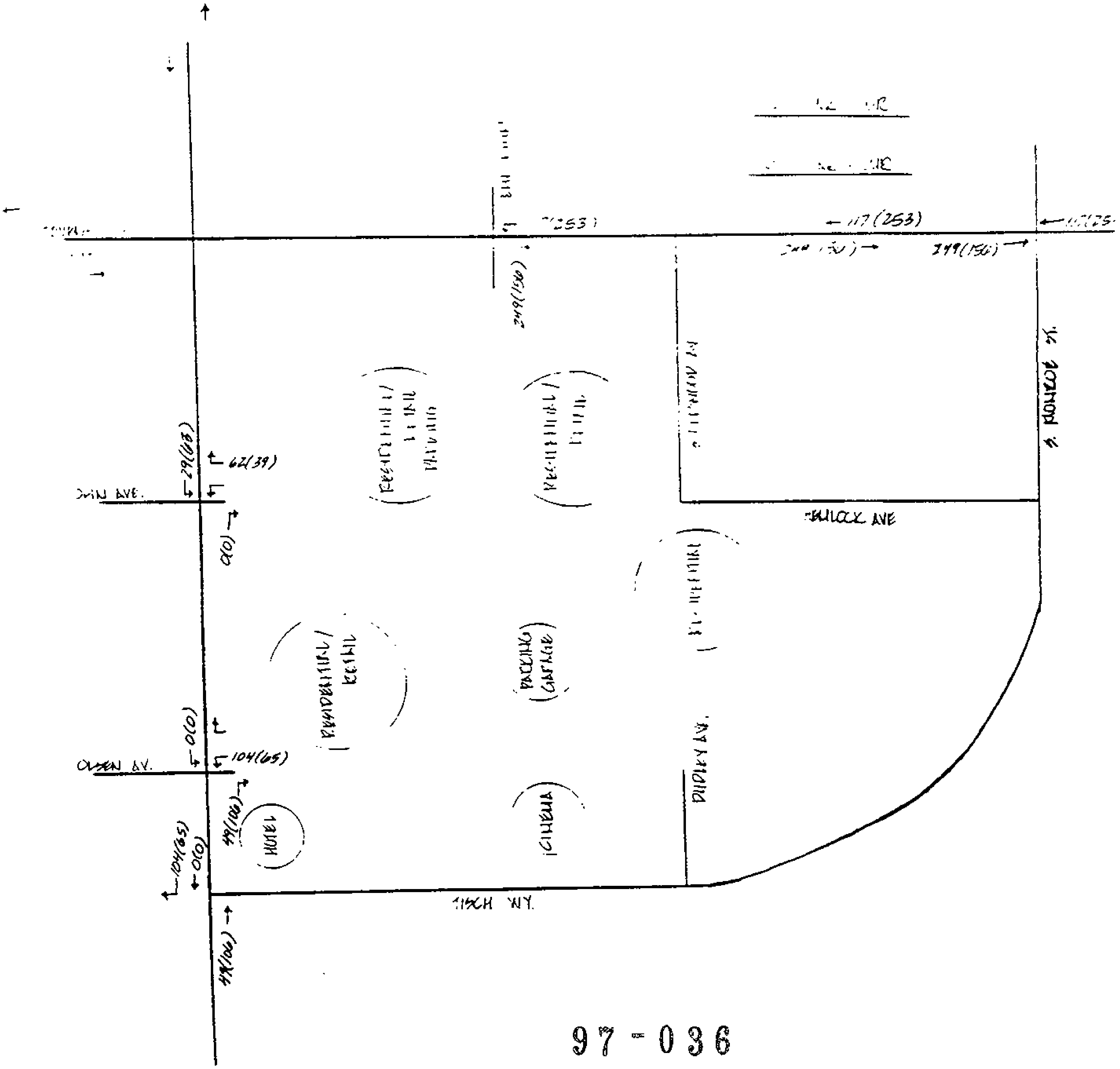
RESIDENTIAL TRIPS



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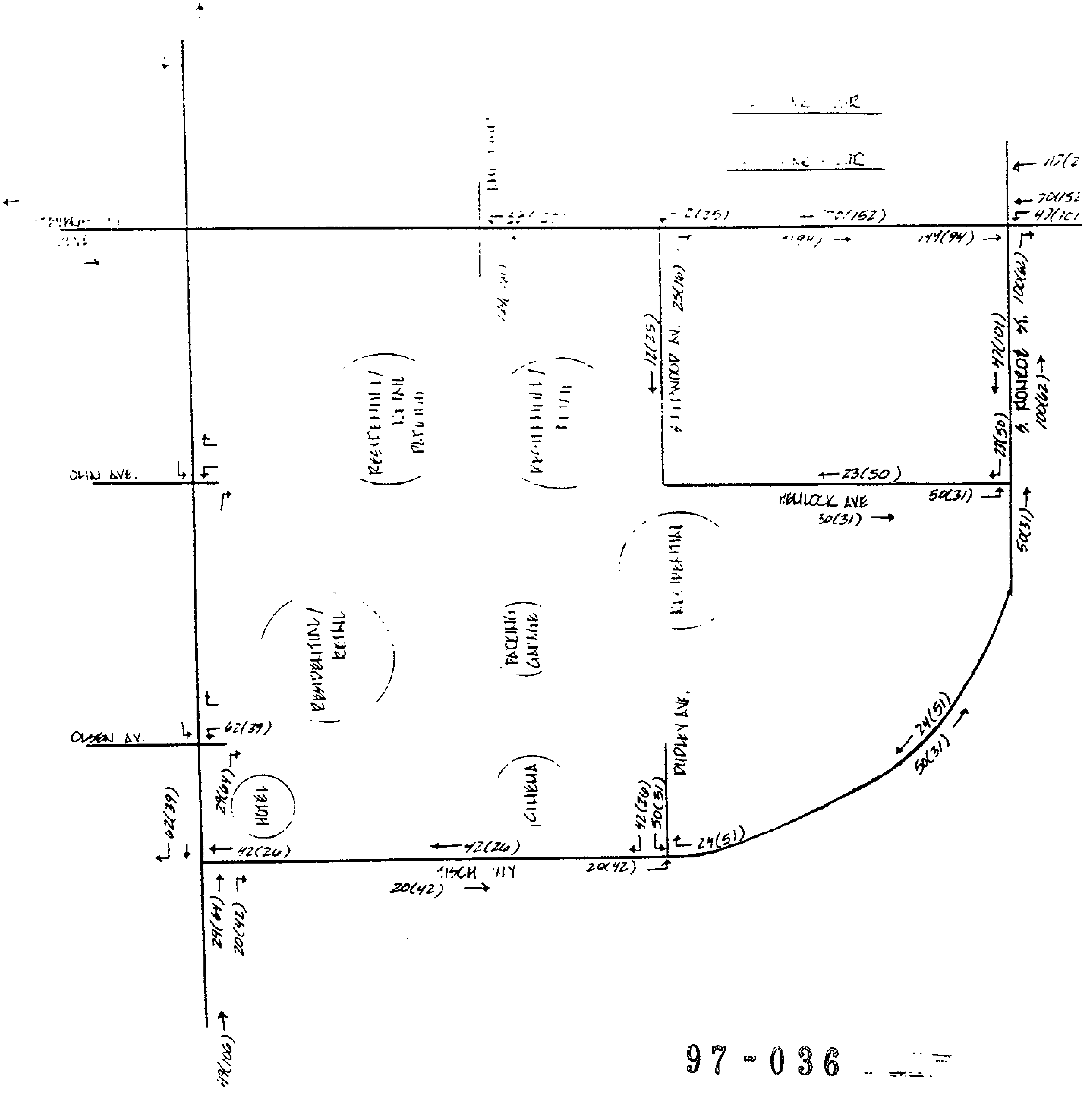
10/20/97

[illegible]

[illegible]



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12/11/97

INTERSECTION: Monroe/Stevens Creek
PEAK HOUR: Saturday Peak Hour
COUNT DATE: 7/19/97
GROWTH
BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

	SCENARIO 6 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNTR PROJECT TRIPS (P2)			TOTAL TRIPS (P4)		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	740	25	279	0	3	22	58	0	0	0	0	0	58	0	0
East	164	1268	908	109	106	0	0	56	58	0	372	0	0	428	58
South	24	40	157	20	12	299	0	0	0	0	0	0	0	0	0
West	137	1989	16	81	57	5	0	56	0	0	275	0	0	331	0

	E + G			SCENARIO 7 BACKGROUND E + G + A			SCENARIO 8 PROJECT E+G+A+P1			SCENARIO 9 CUMULATIVE E+G+A+P1+P2		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	740	25	279	740	28	301	740	28	301	798	28	301
East	164	1268	908	273	1374	908	273	1746	908	273	1802	966
South	24	40	157	44	52	456	44	52	456	44	52	456
West	137	1989	16	218	2046	21	218	2321	21	218	2377	21

E

```
                        LEVEL OF SERVICE ANALYSIS
========================================================================
LOCATION:      MONROE & STEVENS CREEK
MESSAGE:       PROJECT CONDITIONS     SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:     SATURDAY PEAK          N-S      46.50    3.50
COUNT DATE:    7/19/97                E-W      71.50    7.50
ANAL. DATE:    7/2/97
ANAL. INIT:    RD                     CYCLE LENGTH =  134
GROWTH FACTOR % :    0.0              LOST TIME    =  0.119
----------------------------------------------------------------------
LEG  PATTERN      LANE          APPROVED     PROJECT           TOTAL
                 COUNTS           TRIPS       TRIPS            TRIPS
     LSTSRO    LT  THRU   RT    LT THRU  RT   LT THRU RT     LT  THRU   RT
 N   110010   740    25  279     0    3  22    0    0   0   740    28  301
 E   203010   164  1268  908   109  106   0    0  372   0   273  1746  908
 S   101010    24    40  157    20   12 299    0    0   0    44    52  456
 W   203010   137  1989   16    81   57   5    0  275   0   218  2321   21
======================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   V/C    ADJ./    ADJ.   C. CAP.
              L S T S R O                            LANE     V/C
======================================================================
 N      2     1 1 0 0 0 0    765     3037    0.252   0.045   0.297     902
 E      2     2 0 0 0 0 0    164     3015    0.054   0.045   0.099     298
 S      1     0 0 1 0 0 0     40     1780    0.022   0.023   0.045      80
 W      3     0 0 3 0 0 0   1989     5340    0.372   0.068   0.440    2350
                                          LT = 0.119
TOTALS  8                   2958             0.819                    3630
                                       1 - 0.819 = 0.181 /  8 = 0.023
                                                            V/C = 0.815
                          EXISTING          LEVEL OF SERVICE =   D
----------------------------------------------------------------------
 N      2     1 1 0 0 0 0    768     3040    0.253   0.031   0.284     863
 E      2     2 0 0 0 0 0    273     3015    0.091   0.031   0.122     368
 S      1     0 0 1 0 0 0     52     1780    0.029   0.016   0.045      80
 W      3     0 0 3 0 0 0   2046     5340    0.383   0.047   0.430    2296
                                          LT = 0.119
TOTALS  8                   3139             0.875                    3607
                                       1 - 0.875 = 0.125 /  8 = 0.016
                                                            V/C = 0.870
                       EXISTING + APPROVED    LEVEL OF SERVICE =   D
----------------------------------------------------------------------
 N      2     1 1 0 0 0 0    768     3040    0.253   0.018   0.271     824
 E      2     2 0 0 0 0 0    273     3015    0.091   0.018   0.109     329
 S      1     0 0 1 0 0 0     52     1780    0.029   0.009   0.038      68
 W      3     0 0 3 0 0 0   2321     5340    0.435   0.027   0.462    2467
                                          LT = 0.119
TOTALS  8                   3414             0.927                    3688
                                       1 - 0.927 = 0.073 /  8 = 0.009
                                                            V/C = 0.926
              EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   E
======================================================================
( 3414 - 3139 )/ 3139 =    8.76 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
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97-036

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                         LEVEL OF SERVICE ANALYSIS
=========================================================================
LOCATION:      MONROE & STEVENS CREEK
MESSAGE:       PROJECT CONDITIONS     SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:     SATURDAY PEAK NM|6-10|N-S      46.50    8.50
COUNT DATE:    7/19/97               E-W      71.50    7.50
ANAL. DATE:    7/2/97
ANAL. INIT:    RD                    CYCLE LENGTH =  134
GROWTH FACTOR % :    0.0             LOST TIME    =  0.119
-----------------------------------------------------------------------
LEG  PATTERN      LANE            APPROVED     PROJECT          TOTAL
                  COUNTS            TRIPS        TRIPS          TRIPS
     LSTSRO     LT   THRU   RT    LT THRU  RT   LT THRU RT    LT  THRU   RT
 N   110010    740     25  279     0    3  22    0    0  0   740    28  301
 E   203010    164   1268  908   109  106   0    0  372  0   273  1746  908
 S   101010     24     40  157    20   12 299    0    0  0    44    52  456
 W   203100    137   1989   16    81   57   5    0  275  0   218  2321   21
=======================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   I. CAP.
              L S T S R O                            LANE     G/C
=======================================================================
 N      2     1 1 0 0 0 0    765     3037    0.252   0.060   0.312     948
 E      2     2 0 0 0 0 0    164     3015    0.054   0.060   0.114     344
 S      1     0 0 1 0 0 0     40     1780    0.022   0.030   0.052      93
 W      4     0 0 3 1 0 0   2005     7112    0.282   0.120   0.402    2859
                                         LT = 0.119
TOTALS  9                   2974             0.729                    4244
                                   1 - 0.729 = 0.271 /  9 = 0.030
                                                            V/C = 0.701
                                 EXISTING           LEVEL OF SERVICE =  C
-----------------------------------------------------------------------
 N      2     1 1 0 0 0 0    768     3040    0.253   0.048   0.301     915
 E      2     2 0 0 0 0 0    273     3015    0.091   0.048   0.139     419
 S      1     0 0 1 0 0 0     52     1780    0.029   0.024   0.053      94
 W      4     0 0 3 1 0 0   2067     7110    0.291   0.096   0.387    2752
                                         LT = 0.119
TOTALS  9                   3160             0.783                    4180
                                   1 - 0.783 = 0.217 /  9 = 0.024
                                                            V/C = 0.756
                            EXISTING + APPROVED     LEVEL OF SERVICE =  C
-----------------------------------------------------------------------
 N      2     1 1 0 0 0 0    768     3040    0.253   0.040   0.293     891
 E      2     2 0 0 0 0 0    273     3015    0.091   0.040   0.131     395
 S      1     0 0 1 0 0 0     52     1780    0.029   0.020   0.049      87
 W      4     0 0 3 1 0 0   2342     7111    0.329   0.080   0.409    2908
                                         LT = 0.119
TOTALS  9                   3435             0.821                    4281
                                   1 - 0.821 = 0.179 /  9 = 0.020
                                                            V/C = 0.802
                  EXISTING + APPROVED + PROJECT     LEVEL OF SERVICE =  D
=======================================================================
( 3435 - 3160 )/ 3160 =   8.70 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
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97-036

E

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                          LEVEL OF SERVICE ANALYSIS
=========================================================================
LOCATION:      MONROE & STEVENS CREEK
MESSAGE:       CUMULATIVE CONDITIONS  SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:     SATURDAY PEAK          N-S      46.50    8.50
COUNT DATE:    7/19/97                E-W      71.50    7.50
ANAL. DATE:    7/2/97
ANAL. INIT:    RD                     CYCLE LENGTH =  134
GROWTH FACTOR % :    0.0              LOST TIME     =  0.119
----------------------------------------------------------------------
LEG  PATTERN      LANE           APPROVED      PROJECT          TOTAL
                 COUNTS            TRIPS         TRIPS           TRIPS
     LSTSRO     LT  THRU   RT    LT THRU  RT   LT THRU RT    LT   THRU   RT
 N   110010    740    25  279     0    3  22   58    0  0   798     28  301
 E   203010    164  1268  908   109  106   0    0  428 58   273   1802  966
 S   101010     24    40  157    20   12 299    0    0  0    44     52  456
 W   203010    137  1989   16    81   57   5    0  331  0   218   2377   21
======================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
               L S T S R O                           LANE     G/C
======================================================================
 N      2     1 1 0 0 0 0    765     3037    0.252   0.045   0.297     902
 E      2     2 0 0 0 0 0    164     3015    0.054   0.045   0.099     298
 S      1     0 0 1 0 0 0     40     1780    0.022   0.023   0.045      80
 W      3     0 0 3 0 0 0   1989     5340    0.372   0.068   0.440    2350
                                         LT = 0.119
TOTALS  8                   2958             0.819                    3630
                                    1 - 0.819 = 0.181 /  8 = 0.023
                                                             V/C = 0.815
                                 EXISTING         LEVEL OF SERVICE =   D
----------------------------------------------------------------------
 N      2     1 1 0 0 0 0    768     3040    0.253   0.031   0.284     863
 E      2     2 0 0 0 0 0    273     3015    0.091   0.031   0.122     368
 S      1     0 0 1 0 0 0     52     1780    0.029   0.016   0.045      80
 W      3     0 0 3 0 0 0   2046     5340    0.383   0.047   0.430    2296
                                         LT = 0.119
TOTALS  8                   3139             0.875                    3607
                                    1 - 0.875 = 0.125 /  8 = 0.016
                                                             V/C = 0.870
                            EXISTING + APPROVED    LEVEL OF SERVICE =   D
----------------------------------------------------------------------
 N      2     1 1 0 0 0 0    826     3038    0.272   0.011   0.283     860
 E      2     2 0 0 0 0 0    273     3015    0.091   0.011   0.102     308
 S      1     0 0 1 0 0 0     52     1780    0.029   0.005   0.034      61
 W      3     0 0 3 0 0 0   2377     5340    0.445   0.016   0.461    2462
                                         LT = 0.119
TOTALS  8                   3528             0.956                    3691
                                    1 - 0.956 = 0.044 /  8 = 0.005
                                                             V/C = 0.956
                 EXISTING + APPROVED + PROJECT     LEVEL OF SERVICE =   E
======================================================================
( 3528 - 3139 )/ 3139 =  12.39 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
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97-036

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                      LEVEL OF SERVICE ANALYSIS
=======================================================================
LOCATION:      MONROE & STEVENS CREEK
MESSAGE:       CUMULATIVE SATURDAY     SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:     PM   MITIGATION         N-S      46.50     8.50
COUNT DATE:    7/19/97                 E-W      71.50     7.50
ANAL. DATE:    7/2/97
ANAL. INIT:    RD                      CYCLE LENGTH =  134
GROWTH FACTOR % :    0.0               LOST TIME    =  0.119
---------------------------------------------------------------------
LEG  PATTERN       LANE            APPROVED     PROJECT         TOTAL
                  COUNTS             TRIPS       TRIPS          TRIPS
     LSTSRO    LT   THRU   RT    LT THRU  RT   LT THRU RT    LT  THRU   RT
 N   110010   740     25  279     0    3  22   58    0   0   798    28  301
 E   203010   164   1268  908   109  106   0    0  428  58   273  1802  966
 S   101010    24     40  157    20   12 299    0    0   0    44    52  456
 W   203100   137   1989   16    81   57   5    0  331   0   218  2377   21
=====================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./   ADJ.   C. CAP.
              L S T S R O                             LANE    G/C
=====================================================================
 N      2     1 1 0 0 0 0      765     3037   0.252  0.060  0.312     948
 E      2     2 0 0 0 0 0      164     3015   0.054  0.060  0.114     344
 S      1     0 0 1 0 0 0       40     1780   0.022  0.030  0.052      93
 W      4     0 0 3 1 0 0     2005     7112   0.282  0.120  0.402    2859
                                        LT =  0.119
TOTALS  9                     2974            0.729                  4244
                                    1 - 0.729 = 0.271 /  9 = 0.030
                                                         V/C = 0.701
                                EXISTING         LEVEL OF SERVICE =   C
---------------------------------------------------------------------
 N      2     1 1 0 0 0 0      768     3040   0.253  0.048  0.301     915
 E      2     2 0 0 0 0 0      273     3015   0.091  0.048  0.139     419
 S      1     0 0 1 0 0 0       52     1780   0.029  0.024  0.053      94
 W      4     0 0 3 1 0 0     2067     7110   0.291  0.096  0.387    2752
                                        LT =  0.119
TOTALS  9                     3160            0.783                  4180
                                    1 - 0.783 = 0.217 /  9 = 0.024
                                                         V/C = 0.756
                         EXISTING + APPROVED     LEVEL OF SERVICE =   C
---------------------------------------------------------------------
 N      2     1 1 0 0 0 0      826     3038   0.272  0.034  0.306     930
 E      2     2 0 0 0 0 0      273     3015   0.091  0.034  0.125     377
 S      1     0 0 1 0 0 0       52     1780   0.029  0.017  0.046      82
 W      4     0 0 3 1 0 0     2398     7111   0.337  0.068  0.405    2880
                                        LT =  0.119
TOTALS  9                     3549            0.848                  4269
                                    1 - 0.848 = 0.152 /  9 = 0.017
                                                         V/C = 0.831
              EXISTING + APPROVED + PROJECT     LEVEL OF SERVICE =   D
=====================================================================
( 3549 - 3160 )/ 3160 =  12.31 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

E

12/11/97

INTERSECTION: Stevens Creek/Redwood
PEAK HOUR: Saturday Peak Hour
COUNT DATE: 9/27/97
GROWTH
BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

	SCENARIO 6 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNTR PROJECT TRIPS (P2)			TOTAL TRIPS (P4)		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	248	0	222	0	0	0	56	0	69	0	0	0	56	0	69
East	59	1541	238	114	82	0	0	0	56	0	372	0	0	372	56
South	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
West	207	1736	24	0	95	8	69	0	0	0	275	0	69	275	0

	E + G			SCENARIO 7 BACKGROUND E + G + A			SCENARIO 8 PROJECT E+G+A+P1			SCENARIO 9 CUMULATIVE E+G+A+P1+P2		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	248	0	222	248	0	222	248	0	222	304	0	291
East	59	1541	238	173	1623	238	173	1995	238	173	1995	294
South	0	0	0	0	0	0	0	0	0	0	0	0
West	207	1736	24	207	1831	32	207	2106	32	276	2106	32

```
                              LEVEL OF SERVICE ANALYSIS
===========================================================================
LOCATION:       REDWOOD & STEVENS CREEK
MESSAGE:        PROJECT CONDITIONS      SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:      SATURDAY PEAK           N-S      40.00    3.00
COUNT DATE:     9/27/97                 E-W      90.00    6.50
ANAL. DATE:     7/2/97
ANAL. INIT:     RD                      CYCLE LENGTH =  139.5
GROWTH FACTOR % :    0.0                LOST TIME    =  0.068
--------------------------------------------------------------------------
LEG  PATTERN      LANE            APPROVED     PROJECT           TOTAL
                 COUNTS             TRIPS       TRIPS             TRIPS
     LSTSRO    LT  THRU  RT     LT THRU  RT    LT THRU RT     LT  THRU  RT
 N   200010   248     0 222      0    0   0     0   0   0    248     0 222
 E   103010    59  1541 238    114   82   0     0 372   0    173  1995 238
 S   000000     0     0   0      4    0   0     0   0   0      4     0   0
 W   203000   207  1736  24      0   95   8     0 275   0    207  2106  32
==========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.    I. CAP.
               L S T S R O                           LANE     G/C
==========================================================================
 N       2    2 0 0 0 0 0     248     3015   0.082  0.163   0.245      739
 E       1    1 0 0 0 0 0      59     1675   0.035  0.082   0.117      196
 S       0    0 0 0 0 0 0       0        0   0.000  0.000   0.000        0
 W       3    0 0 3 0 0 0    1736     5340   0.325  0.245   0.570     3044
                                       LT = 0.068
TOTALS  6                    2043            0.510                    3979
                                   1 - 0.510 = 0.490 /  6 = 0.082
                                                              V/C = 0.513
                                EXISTING          LEVEL OF SERVICE =   A
--------------------------------------------------------------------------
 N       2    2 0 0 0 0 0     248     3015   0.082  0.135   0.217      654
 E       1    1 0 0 0 0 0     173     1675   0.103  0.067   0.170      285
 S       0    0 0 0 0 0 0       0        0   0.000  0.000   0.000        0
 W       3    0 0 3 0 0 0    1831     5340   0.343  0.202   0.545     2910
                                       LT = 0.068
TOTALS  6                    2252            0.596                    3849
                                   1 - 0.596 = 0.404 /  6 = 0.067
                                                              V/C = 0.585
                             EXISTING + APPROVED    LEVEL OF SERVICE =   A
--------------------------------------------------------------------------
 N       2    2 0 0 0 0 0     248     3015   0.082  0.118   0.200      603
 E       1    1 0 0 0 0 0     173     1675   0.103  0.059   0.162      271
 S       0    0 0 0 0 0 0       0        0   0.000  0.000   0.000        0
 W       3    0 0 3 0 0 0    2106     5340   0.394  0.176   0.570     3044
                                       LT = 0.068
TOTALS  6                    2527            0.647                    3918
                                   1 - 0.647 = 0.353 /  6 = 0.059
                                                              V/C = 0.645
                   EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   B
==========================================================================
( 2527 - 2252 )/ 2252 =  12.21 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                         LEVEL OF SERVICE ANALYSIS
==========================================================================
LOCATION:         REDWOOD & STEVENS CREEK
MESSAGE:          CUMULATIVE CONDITIONS  SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:        SATURDAY PEAK          N-S      40.00    3.00
COUNT DATE:       9/27/97                E-W      90.00    6.50
ANAL. DATE:       7/2/97
ANAL. INIT:       RD                     CYCLE LENGTH =  139.5
GROWTH FACTOR % :     0.0                LOST TIME    =  0.068
-------------------------------------------------------------------------
LEG  PATTERN      LANE            APPROVED      PROJECT          TOTAL
                 COUNTS             TRIPS        TRIPS           TRIPS
     LSTSRO    LT  THRU   RT     LT THRU  RT   LT THRU RT     LT  THRU   RT
 N   200010   248     0  222      0    0   0   56    0 69    304     0  291
 E   103010    59  1541  238    114   82   0    0  372 56    173  1995  294
 S   000000     0     0    0      0    0   0    0    0  0      0     0    0
 W   203000   207  1736   24      0   95   8   69  275  0    276  2106   32
=========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
               L S T S R O                            LANE     G/C
=========================================================================
 N      2    2 0 0 0 0 0     248     3015    0.082   0.163   0.245     739
 E      1    1 0 0 0 0 0      59     1675    0.035   0.082   0.117     196
 S      0    0 0 0 0 0 0       0        0    0.000   0.000   0.000       0
 W      3    0 0 3 0 0 0    1736     5340    0.325   0.245   0.570    3044
                                          LT = 0.068
TOTALS  6                   2043             0.510                    3979
                                     1 - 0.510 = 0.490 /  6 = 0.082
                                                             V/C = 0.513
                                EXISTING           LEVEL OF SERVICE =   A
-------------------------------------------------------------------------
 N      2    2 0 0 0 0 0     248     3015    0.082   0.135   0.217     654
 E      1    1 0 0 0 0 0     173     1675    0.103   0.067   0.170     285
 S      0    0 0 0 0 0 0       0        0    0.000   0.000   0.000       0
 W      3    0 0 3 0 0 0    1831     5340    0.343   0.202   0.545    2910
                                          LT = 0.068
TOTALS  6                   2252             0.596                    3849
                                     1 - 0.596 = 0.404 /  6 = 0.067
                                                             V/C = 0.585
                           EXISTING + APPROVED     LEVEL OF SERVICE =   A
-------------------------------------------------------------------------
 N      2    2 0 0 0 0 0     304     3015    0.101   0.111   0.212     639
 E      1    1 0 0 0 0 0     173     1675    0.103   0.056   0.159     266
 S      0    0 0 0 0 0 0       0        0    0.000   0.000   0.000       0
 W      3    0 0 3 0 0 0    2106     5340    0.394   0.167   0.561    2996
                                          LT = 0.068
TOTALS  6                   2583             0.666                    3901
                                     1 - 0.666 = 0.334 /  6 = 0.056
                                                             V/C = 0.662
                 EXISTING + APPROVED + PROJECT     LEVEL OF SERVICE =   B
=========================================================================
( 2583 - 2252 )/ 2252 =  14.70 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

12/11/97

INTERSECTION: Stevens Creek/Emporium
PEAK HOUR: Saturday Peak Hour
COUNT DATE: 9/27/97
GROWTH
BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

	SCENARIO 6 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNTR PROJECT TRIPS (P2)			TOTAL TRIPS (P4)		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	178	46	196	0	0	0	0	2	0	0	0	0	0	2	0
East	177	1502	99	0	86	0	0	69	0	372	0	0	372	69	0
South	48	87	223	0	0	0	0	2	0	0	0	275	0	2	275
West	374	1576	63	0	103	0	0	69	0	0	0	0	0	69	0

	E + G			SCENARIO 7 BACKGROUND E + G + A			SCENARIO 8 PROJECT E+G+A+P1			SCENARIO 9 CUMULATIVE E+G+A+P1+P2		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	178	46	196	178	46	196	178	46	196	178	48	196
East	177	1502	99	177	1588	99	549	1588	99	549	1657	99
South	48	87	223	48	87	223	48	87	498	48	89	498
West	374	1576	63	374	1679	63	374	1679	63	374	1748	63

```
                         LEVEL OF SERVICE ANALYSIS
========================================================================
LOCATION:      EMPORIUM & STEVENS CREEK
MESSAGE:       PROJECT CONDITIONS     SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:     SATURDAY PEAK          N-S      34.00     4.00
COUNT DATE:    9/27/97                E-W      88.00     8.00
ANAL. DATE:    7/2/97
ANAL. INIT:    RD                     CYCLE LENGTH =  134
GROWTH FACTOR % :    0.0              LOST TIME    =  0.090
----------------------------------------------------------------------
LEG  PATTERN       LANE            APPROVED     PROJECT          TOTAL
                  COUNTS             TRIPS       TRIPS           TRIPS
     LSTSRO     LT  THRU   RT    LT THRU  RT   LT THRU RT     LT  THRU   RT
 N   101010    178    46  196     0    0   0    0    0   0   178    46  196
 E   203010    177  1502   99     0   86   0  372    0   0   549  1588   99
 S   101010     48    87  223     0    0   0    0    0 275    48    87  498
 W   203010    374  1576   63     0  103   0    0    0   0   374  1679   63
======================================================================
LEG  # LANES  CRIT. MOVE    C. VOL.  T. CAP.   G/C     ADJ./    ADJ.   C. CAP.
               L S T S R O                            LANE     G/C
======================================================================
 N      1     1 0 0 0 0 0     178     1675    0.106   0.050   0.156    261
 E      3     0 0 3 0 0 0    1502     5340    0.281   0.150   0.431   2302
 S      1     0 0 1 0 0 0      87     1780    0.049   0.050   0.099    176
 W      2     2 0 0 0 0 0     374     3015    0.124   0.100   0.224    675
                                         LT = 0.090
TOTALS  7                    2141              0.650                  3414
                                     1 - 0.650 = 0.350 /  7 = 0.050
                                                          V/C = 0.627
                                  EXISTING          LEVEL OF SERVICE =  B
----------------------------------------------------------------------
 N      1     1 0 0 0 0 0     178     1675    0.106   0.048   0.154    258
 E      3     0 0 3 0 0 0    1588     5340    0.297   0.143   0.440   2350
 S      1     0 0 1 0 0 0      87     1780    0.049   0.048   0.097    173
 W      2     2 0 0 0 0 0     374     3015    0.124   0.095   0.219    660
                                         LT = 0.090
TOTALS  7                    2227              0.666                  3441
                                     1 - 0.666 = 0.334 /  7 = 0.048
                                                          V/C = 0.647
                              EXISTING + APPROVED    LEVEL OF SERVICE =  B
----------------------------------------------------------------------
 N      1     1 0 0 0 0 0     178     1675    0.106   0.037   0.143    240
 E      2     2 0 0 0 0 0     549     3015    0.182   0.074   0.256    772
 S      1     0 0 1 0 0 0      87     1780    0.049   0.037   0.086    153
 W      3     0 0 3 0 0 0    1679     5340    0.314   0.111   0.425   2270
                                         LT = 0.090
TOTALS  7                    2493              0.741                  3435
                                     1 - 0.741 = 0.259 /  7 = 0.037
                                                          V/C = 0.726
                    EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =  C
======================================================================
( 2493 - 2227 )/ 2227 =  11.94 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

```
                          LEVEL OF SERVICE ANALYSIS
=========================================================================
LOCATION:       WINCHESTER & TISCH
MESSAGE:        PROJECT CONDITIONS     SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:      SATURDAY PEAK          N-S      95.00    6.50
COUNT DATE:     9/27/97                E-W      20.00    3.00
ANAL. DATE:     7/2/97
ANAL. INIT:     RD                     CYCLE LENGTH =  124.5
GROWTH FACTOR % :     0.0              LOST TIME    =  0.076
-----------------------------------------------------------------------
LEG  PATTERN       LANE             APPROVED     PROJECT           TOTAL
                  COUNTS              TRIPS        TRIPS            TRIPS
     LSTSRO     LT   THRU   RT     LT THRU  RT   LT THRU RT      LT  THRU   RT
 N   102100     25   1242  366      0   16   5    0  31  83      25  1289  454
 E   100002    108     40   26     57    0   0    0   0   0     165    40   26
 S   102100    283   1374  148     34   51   0    0 155   0     317  1580  148
 W   000000      0      0    0      0    0   0    0   0   0       0     0    0
=======================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./   ADJ.   I. CAP.
               L S T S R O                           LANE    G/C
=======================================================================
 N      3     0 0 2 1 0 0    1608     5277   0.305   0.197  0.502    2649
 E      2     1 0 0 0 0 2     174     3116   0.056   0.131  0.187     583
 S      1     1 0 0 0 0 0     283     1675   0.169   0.066  0.235     394
 W      0     0 0 0 0 0 0       0        0   0.000   0.000  0.000       0
                                      LT = 0.076
TOTALS  6                    2065            0.606                   3626
                                      1 - 0.606 = 0.394 /  6 = 0.066
                                                           V/C = 0.569
                            EXISTING          LEVEL OF SERVICE =   A
-----------------------------------------------------------------------
 N      3     0 0 2 1 0 0    1629     5277   0.309   0.176  0.485    2559
 E      2     1 0 0 0 0 2     231     3098   0.075   0.117  0.192     595
 S      1     1 0 0 0 0 0     317     1675   0.189   0.059  0.248     415
 W      0     0 0 0 0 0 0       0        0   0.000   0.000  0.000       0
                                      LT = 0.076
TOTALS  6                    2177            0.649                   3569
                                      1 - 0.649 = 0.351 /  6 = 0.059
                                                           V/C = 0.610
                         EXISTING + APPROVED    LEVEL OF SERVICE =   B
-----------------------------------------------------------------------
 N      3     0 0 2 1 0 0    1743     5273   0.331   0.165  0.496    2615
 E      2     1 0 0 0 0 2     231     3098   0.075   0.110  0.185     573
 S      1     1 0 0 0 0 0     317     1675   0.189   0.055  0.244     409
 W      0     0 0 0 0 0 0       0        0   0.000   0.000  0.000       0
                                      LT = 0.076
TOTALS  6                    2291            0.671                   3597
                                      1 - 0.671 = 0.329 /  6 = 0.055
                                                           V/C = 0.637
                   EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   B
=======================================================================
( 2291 - 2177 )/ 2177 =   5.24 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

12/11/97

INTERSECTION: Winchester/Tisch
PEAK HOUR: Saturday Peak Hour
COUNT DATE: 9/27/97
GROWTH
BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

	SCENARIO 6 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNTR PROJECT TRIPS (P2)			TOTAL TRIPS (P4)		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	25	1242	366	0	16	5	0	24	22	0	31	83	0	55	105
East	108	40	26	57	0	0	0	0	0	0	0	0	0	0	0
South	283	1374	148	34	51	0	0	46	0	0	155	0	0	201	0
West	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	E + G			SCENARIO 7 BACKGROUND E + G + A			SCENARIO 8 PROJECT E+G+A+P2			SCENARIO 9 CUMULATIVE E+G+A+P1+P2		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	2[illegible]	1242	366	25	1258	371	25	1289	454	25	1313	476
East	108	40	26	165	40	26	165	40	26	165	40	26
South	283	[illegible]74	148	317	1425	148	317	1580	148	317	1626	148
West	0		0	0	0	0	0	0	0	0	0	0

97-036

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                          LEVEL OF SERVICE ANALYSIS
===========================================================================
LOCATION:     WINCHESTER & OLSEN
MESSAGE:      CUMULATIVE CONDITIONS  SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:    SATURDAY PEAK          N-S      90.00    6.50
COUNT DATE:   10/4/97                E-W      22.00    3.00
ANAL. DATE:   7/2/97
ANAL. INIT:   RD                     CYCLE LENGTH =  121.5
GROWTH FACTOR % :    0.0             LOST TIME    =  0.078
-------------------------------------------------------------------------
LEG  PATTERN      LANE           APPROVED     PROJECT         TOTAL
                 COUNTS            TRIPS        TRIPS          TRIPS
     LSTSRO     LT  THRU   RT    LT THRU  RT   LT THRU RT    LT  THRU   RT
 N   102100     78  1138  101     0   16   0   16  44   0    94  1198  101
 E   101010    151    14  108     0    0   0  102   0  16   253    14  124
 S   102100     98  1208  154     0   51   0    0  44 143    98  1303  297
 W   100100     76    23  236     0    0   0    0   0   0    76    23  236
=========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./   ADJ.   C. CAP.
              L S T S R O                            LANE    G/C
=========================================================================
 N      1     1 0 0 0 0 0     78     1675    0.047   0.062   0.109    183
 E      1     1 0 0 0 0 0    151     1675    0.090   0.062   0.152    255
 S      3     0 0 2 1 0 0   1362     5299    0.257   0.187   0.444   2353
 W      1     0 0 0 1 0 0    259     1684    0.154   0.062   0.216    364
                                         LT = 0.078
TOTALS  6                   1850             0.626                   3155
                                       1 - 0.626 = 0.374 /  6 = 0.062
                                                             V/C = 0.586
                                  EXISTING         LEVEL OF SERVICE =   A
-------------------------------------------------------------------------
 N      1     1 0 0 0 0 0     78     1675    0.047   0.061   0.108    181
 E      1     1 0 0 0 0 0    151     1675    0.090   0.061   0.151    253
 S      3     0 0 2 1 0 0   1413     5300    0.267   0.182   0.449   2380
 W      1     0 0 0 1 0 0    259     1684    0.154   0.061   0.215    362
                                         LT = 0.078
TOTALS  6                   1901             0.636                   3176
                                       1 - 0.636 = 0.364 /  6 = 0.061
                                                             V/C = 0.599
                             EXISTING + APPROVED    LEVEL OF SERVICE =   A
-------------------------------------------------------------------------
 N      1     1 0 0 0 0 0     94     1675    0.056   0.043   0.099    166
 E      1     1 0 0 0 0 0    253     1675    0.151   0.043   0.194    325
 S      3     0 0 2 1 0 0   1600     5284    0.303   0.129   0.432   2283
 W      1     0 0 0 1 0 0    259     1684    0.154   0.043   0.197    332
                                         LT = 0.078
TOTALS  6                   2206             0.742                   3106
                                       1 - 0.742 = 0.258 /  6 = 0.043
                                                             V/C = 0.710
                    EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   C
=========================================================================
( 2206 - 1901 )/ 1901 =  16.04 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 8A
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97-036

```
                          LEVEL OF SERVICE ANALYSIS
============================================================================
LOCATION:       WINCHESTER & OLSEN
MESSAGE:        PROJECT CONDITIONS      SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:      SATURDAY PEAK           N-S      90.00    6.50
COUNT DATE:     10/4/97                 E-W      22.00    3.00
ANAL. DATE:     7/2/97
ANAL. INIT:     RD                      CYCLE LENGTH =  121.5
GROWTH FACTOR % :    0.0                LOST TIME    =  0.078
--------------------------------------------------------------------------
LEG  PATTERN      LANE            APPROVED     PROJECT           TOTAL
                 COUNTS             TRIPS        TRIPS             TRIPS
     LSTSRO    LT  THRU   RT    LT THRU  RT    LT THRU RT      LT  THRU   RT
 N   102100    78  1138  101     0   16   0    16   12   0     94  1166  101
 E   101010   151    14  108     0    0   0   102    0  16    253    14  124
 S   102100    98  1208  154     0   51   0     0   12 143     98  1271  297
 W   100100    76    23  236     0    0   0     0    0   0     76    23  236
==========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.    G/C    ADJ./    ADJ.   C. CAP.
              L S T S R O                              LANE    G/C
==========================================================================
 N      1     1 0 0 0 0 0     78     1675    0.047   0.062   0.109     183
 E      1     1 0 0 0 0 0    151     1675    0.090   0.062   0.152     255
 S      3     0 0 2 1 0 0   1362     5299    0.257   0.187   0.444    2353
 W      1     0 0 0 1 0 0    259     1684    0.154   0.062   0.216     364
                                        LT = 0.078
TOTALS  6                   1850             0.626                    3155
                                     1 - 0.626 = 0.374 /  6 = 0.062
                                                             V/C = 0.586
                                  EXISTING           LEVEL OF SERVICE =   A
--------------------------------------------------------------------------
 N      1     1 0 0 0 0 0     78     1675    0.047   0.061   0.108     181
 E      1     1 0 0 0 0 0    151     1675    0.090   0.061   0.151     253
 S      3     0 0 2 1 0 0   1413     5300    0.267   0.182   0.449    2380
 W      1     0 0 0 1 0 0    259     1684    0.154   0.061   0.215     362
                                        LT = 0.078
TOTALS  6                   1901             0.636                    3176
                                     1 - 0.636 = 0.364 /  6 = 0.061
                                                             V/C = 0.599
                            EXISTING + APPROVED      LEVEL OF SERVICE =   A
--------------------------------------------------------------------------
 N      1     1 0 0 0 0 0     94     1675    0.056   0.044   0.100     168
 E      1     1 0 0 0 0 0    253     1675    0.151   0.044   0.195     327
 S      3     0 0 2 1 0 0   1568     5283    0.297   0.132   0.429    2266
 W      1     0 0 0 1 0 0    259     1684    0.154   0.044   0.198     333
                                        LT = 0.078
TOTALS  6                   2174             0.736                    3094
                                     1 - 0.736 = 0.264 /  6 = 0.044
                                                             V/C = 0.703
                  EXISTING + APPROVED + PROJECT      LEVEL OF SERVICE =   C
==========================================================================
( 2174 - 1901 )/ 1901 =  14.36 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

12/11/97

INTERSECTION: Winchester/Olsen
PEAK HOUR: Saturday Peak Hour
COUNT DATE: 10/04/97
GROWTH
BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

	SCENARIO 6 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNTR PROJECT TRIPS (P2)			TOTAL TRIPS (P4)		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	78	1138	101	0	16	0	0	32	0	16	12	0	16	44	0
East	151	14	108	0	0	0	0	0	0	102	0	16	102	0	16
South	98	1208	154	0	51	0	0	32	0	0	12	143	0	44	143
West	76	23	236	0	0	0	0	0	0	0	0	0	0	0	0

	E + G			SCENARIO 7 BACKGROUND E + G + A			SCENARIO 8 PROJECT E+G+A+P2			SCENARIO 9 CUMULATIVE E+G+A+P1+P2		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	78	1138	101	78	1154	101	94	1166	101	94	1198	101
East	151	14	108	151	14	108	253	14	124	253	14	124
South	98	1208	154	98	1259	154	98	1271	297	98	1303	297
West	76	23	236	76	23	236	76	23	236	76	23	236

97-036

```
                         LEVEL OF SERVICE ANALYSIS
=========================================================================
LOCATION:       EMPORIUM & STEVENS CREEK
MESSAGE:        CUMULATIVE CONDITIONS  SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:      SATURDAY PEAK          N-S      34.00     4.00
COUNT DATE:     9/27/97                E-W      88.00     8.00
ANAL. DATE:     7/2/97
ANAL. INIT:     RD                     CYCLE LENGTH =  134
GROWTH FACTOR % :    0.0               LOST TIME     =  0.090
-----------------------------------------------------------------------
LEG  PATTERN     LANE            APPROVED      PROJECT          TOTAL
                COUNTS             TRIPS        TRIPS           TRIPS
     LSTSRO    LT  THRU   RT    LT THRU  RT    LT THRU RT     LT  THRU   RT
 N   101010   178    46  196     0    0   0     0   2   0    178    48  196
 E   203010   177  1502   99     0   86   0   372  69   0    549  1657   99
 S   101010    48    87  223     0    0   0     0   2 275     48    89  498
 W   203010   374  1576   63     0  103   0     0  69   0    374  1748   63
=======================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./   ADJ.   C. CAP.
              L S T S R O                            LANE    G/C
=======================================================================
 N      1     1 0 0 0 0 0    178     1675    0.106   0.050   0.156    261
 E      3     0 0 3 0 0 0   1502     5340    0.281   0.150   0.431   2302
 S      1     0 0 1 0 0 0     87     1780    0.049   0.050   0.099    176
 W      2     2 0 0 0 0 0    374     3015    0.124   0.100   0.224    675
                                        LT = 0.090
TOTALS  7                   2141             0.650                    3414
                                     1 - 0.650 = 0.350 /  7 = 0.050
                                                              V/C = 0.627
                                  EXISTING          LEVEL OF SERVICE =   B
-----------------------------------------------------------------------
 N      1     1 0 0 0 0 0    178     1675    0.106   0.048   0.154    258
 E      3     0 0 3 0 0 0   1588     5340    0.297   0.143   0.440   2350
 S      1     0 0 1 0 0 0     87     1780    0.049   0.048   0.097    173
 W      2     2 0 0 0 0 0    374     3015    0.124   0.095   0.219    660
                                        LT = 0.090
TOTALS  7                   2227             0.666                    3441
                                     1 - 0.666 = 0.334 /  7 = 0.048
                                                              V/C = 0.647
                              EXISTING + APPROVED   LEVEL OF SERVICE =   B
-----------------------------------------------------------------------
 N      1     1 0 0 0 0 0    178     1675    0.106   0.035   0.141    236
 E      2     2 0 0 0 0 0    549     3015    0.182   0.070   0.252    760
 S      1     0 0 1 0 0 0     89     1780    0.050   0.035   0.085    151
 W      3     0 0 3 0 0 0   1748     5340    0.327   0.105   0.432   2307
                                        LT = 0.090
TOTALS  7                   2564             0.755                    3454
                                     1 - 0.755 = 0.245 /  7 = 0.035
                                                              V/C = 0.742
                    EXISTING + APPROVED + PROJECT   LEVEL OF SERVICE =   C
=======================================================================
( 2564 - 2227 )/ 2227 =  15.13 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                         LEVEL OF SERVICE ANALYSIS
==========================================================================
LOCATION:      WINCHESTER & TISCH
MESSAGE:       CUMULATIVE CONDITIONS  SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:     SATURDAY PEAK          N-S      95.00    6.50
COUNT DATE:    9/27/97                E-W      20.00    3.00
ANAL. DATE:    7/2/97
ANAL. INIT:    RD                     CYCLE LENGTH =  124.5
GROWTH FACTOR % :    0.0              LOST TIME    =  0.076
------------------------------------------------------------------------
LEG  PATTERN      LANE          APPROVED      PROJECT         TOTAL
                 COUNTS           TRIPS         TRIPS          TRIPS
     LSTSRO   LT  THRU   RT    LT THRU  RT    LT THRU RT     LT  THRU   RT
 N   102100   25  1242  366     0   16   5     0  55 105     25  1313  476
 E   100002  108    40   26    57    0   0     0   0   0    165    40   26
 S   102100  283  1374  148    34   51   0     0 201   0    317  1626  148
 W   000000    0     0    0     0    0   0     0   0   0      0     0    0
========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./   ADJ.  C. CAP.
              L S T S R O                             LANE    G/C
========================================================================
 N      3     0 0 2 1 0 0    1608     5277   0.305  0.197  0.502   2649
 E      2     1 0 0 0 0 2     174     3116   0.056  0.131  0.187    583
 S      1     1 0 0 0 0 0     283     1675   0.169  0.066  0.235    394
 W      0     0 0 0 0 0 0       0        0   0.000  0.000  0.000      0
                                         LT = 0.076
TOTALS  6                    2065            0.606                 3626
                                     1 - 0.606 = 0.394 /  6 = 0.066
                                                          V/C = 0.569
                               EXISTING          LEVEL OF SERVICE =  A
------------------------------------------------------------------------
 N      3     0 0 2 1 0 0    1629     5277   0.309  0.176  0.485   2559
 E      2     1 0 0 0 0 2     231     3098   0.075  0.117  0.192    595
 S      1     1 0 0 0 0 0     317     1675   0.189  0.059  0.248    415
 W      0     0 0 0 0 0 0       0        0   0.000  0.000  0.000      0
                                         LT = 0.076
TOTALS  6                    2177            0.649                 3569
                                     1 - 0.649 = 0.351 /  6 = 0.059
                                                          V/C = 0.610
                           EXISTING + APPROVED   LEVEL OF SERVICE =  B
------------------------------------------------------------------------
 N      3     0 0 2 1 0 0    1789     5272   0.339  0.161  0.500   2636
 E      2     1 0 0 0 0 2     231     3098   0.075  0.107  0.182    564
 S      1     1 0 0 0 0 0     317     1675   0.189  0.054  0.243    407
 W      0     0 0 0 0 0 0       0        0   0.000  0.000  0.000      0
                                         LT = 0.076
TOTALS  6                    2337            0.679                 3607
                                     1 - 0.679 = 0.321 /  6 = 0.054
                                                          V/C = 0.648
                 EXISTING + APPROVED + PROJECT   LEVEL OF SERVICE =  B
========================================================================
( 2337 - 2177 )/ 2177 =   7.35 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

INTERSECTION: Monroe/Stevens Creek
PEAK HOUR: Saturday Peak Hour
COUNT DATE: 7/19/97
GROWTH
BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

Alternative Access at Dudley Only

	SCENARIO 6 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNTRY PROJECT TRIPS (P2)			TOTAL TRIPS (P4)		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	740	25	279	0	3	22	58	0	0	0	0	0	58	0	0
East	164	1268	908	109	106	0	0	56	58	74	297	0	74	353	58
South	24	40	157	20	12	299	0	0	0	0	0	54	0	0	54
West	137	1989	16	81	57	5	0	56	0	0	221	0	0	277	0

	E + G			SCENARIO 7 BACKGROUND E + G + A			SCENARIO 8 PROJECT E+G+A+P1			SCENARIO 9 CUMULATIVE E+G+A+P1+P2		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	740	25	279	740	28	301	740	28	301	798	28	301
East	164	1268	908	273	1374	908	347	1671	908	347	1727	966
South	24	40	157	44	52	456	44	52	510	44	52	510
West	137	1989	16	218	2046	21	218	2267	21	218	2323	21

```
                           LEVEL OF SERVICE ANALYSIS
=========================================================================
LOCATION:       MONROE & STEVENS CREEK
MESSAGE:        PROJECT CONDITIONS      SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:      SATURDAY PEAK           N-S      46.50    8.50
COUNT DATE:     7/19/97                 E-W      71.50    7.50
ANAL. DATE:     7/2/97
ANAL. INIT:     RD                      CYCLE LENGTH =  134
GROWTH FACTOR % :    0.0                LOST TIME    =  0.119
-----------------------------------------------------------------------
LEG  PATTERN     LANE              APPROVED    PROJECT           TOTAL
                COUNTS              TRIPS       TRIPS            TRIPS
     LSTSRO    LT  THRU   RT     LT THRU  RT   LT THRU RT     LT  THRU  RT
 N   110010   740    25  279      0    3  22    0    0  0    740    28  301
 E   203010   164  1268  908    109  106   0   74  297  0    347  1671  908
 S   101010    24    40  157     20   12 299    0    0 54     44    52  510
 W   203010   137  1989   16     81   57   5    0  221  0    218  2267   21
=======================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./   ADJ.   C. CAP.
              L S T S R O                            LANE    G/C
=======================================================================
 N      2     1 1 0 0 0 0    765     3037    0.252   0.045   0.297    902
 E      2     2 0 0 0 0 0    164     3015    0.054   0.045   0.099    298
 S      1     0 0 1 0 0 0     40     1780    0.022   0.023   0.045     80
 W      3     0 0 3 0 0 0   1989     5340    0.372   0.068   0.440   2350
                                         LT = 0.119
TOTALS  8                   2958             0.819                   3630
                                   1 - 0.819 = 0.181 /  8 = 0.023
                                                           V/C = 0.815
                              EXISTING          LEVEL OF SERVICE =   D
-----------------------------------------------------------------------
 N      2     1 1 0 0 0 0    768     3040    0.253   0.031   0.284    863
 E      2     2 0 0 0 0 0    273     3015    0.091   0.031   0.122    368
 S      1     0 0 1 0 0 0     52     1780    0.029   0.016   0.045     80
 W      3     0 0 3 0 0 0   2046     5340    0.383   0.047   0.430   2296
                                         LT = 0.119
TOTALS  8                   3139             0.875                   3607
                                   1 - 0.875 = 0.125 /  8 = 0.016
                                                           V/C = 0.870
                         EXISTING + APPROVED    LEVEL OF SERVICE =   D
-----------------------------------------------------------------------
 N      2     1 1 0 0 0 0    768     3040    0.253   0.015   0.268    815
 E      2     2 0 0 0 0 0    347     3015    0.115   0.015   0.130    392
 S      1     0 0 1 0 0 0     52     1780    0.029   0.007   0.036     64
 W      3     0 0 3 0 0 0   2267     5340    0.425   0.022   0.447   2387
                                         LT = 0.119
TOTALS  8                   3434             0.941                   3658
                                   1 - 0.941 = 0.059 /  8 = 0.007
                                                           V/C = 0.939
                   EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   E
=======================================================================
( 3434 - 3139 )/ 3139 =   9.40 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

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                              LEVEL OF SERVICE ANALYSIS
==========================================================================
LOCATION:        MONROE & STEVENS CREEK
MESSAGE:         PROJECT CONDITIONS     SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:       SATURDAY PEAK WINGMEP  N-S      46.50    3.50
COUNT DATE:      7/19/97                E-W      71.50    7.50
ANAL. DATE:      7/2/97
ANAL. INIT:      RD                     CYCLE LENGTH =  134
GROWTH FACTOR % :     0.0               LOST TIME    =  0.119
-------------------------------------------------------------------------
LEG  PATTERN       LANE              APPROVED     PROJECT          TOTAL
                  COUNTS               TRIPS       TRIPS           TRIPS
     LSTSRO     LT   THRU   RT    LT THRU  RT   LT THRU RT     LT  THRU   RT
 N   110010    740    25   279     0    3  22    0    0  0    740    28  301
 E   203010    164  1268   908   109  106   0   74  297  0    347  1671  908
 S   101010     24    40   157    20   12 299    0    0 54     44    52  510
 W   203100    137  1989    16    81   57   5    0  221  0    218  2267   21
=========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.  V/C    ADJ./    ADJ.    C. CAP.
               L S T S R O                          LANE     V/C
=========================================================================
 N      2     1 1 0 0 0 0    765     3037   0.252  0.060   0.312      948
 E      2     2 0 0 0 0 0    164     3015   0.054  0.060   0.114      344
 S      1     0 0 1 0 0 0     40     1780   0.022  0.030   0.052       93
 W      4     0 0 3 1 0 0   2005     7112   0.282  0.120   0.402     2859
                                        LT = 0.119
TOTALS  9                   2974            0.729                    4244
                                       1 - 0.729 = 0.271 /  9 = 0.030
                                                             V/C = 0.701
                               EXISTING          LEVEL OF SERVICE =   C
-------------------------------------------------------------------------
 N      2     1 1 0 0 0 0    768     3040   0.253  0.048   0.301      915
 E      2     2 0 0 0 0 0    273     3015   0.091  0.048   0.139      419
 S      1     0 0 1 0 0 0     52     1780   0.029  0.024   0.053       94
 W      4     0 0 3 1 0 0   2067     7110   0.291  0.096   0.387     2752
                                        LT = 0.119
TOTALS  9                   3160            0.783                    4180
                                       1 - 0.783 = 0.217 /  9 = 0.024
                                                             V/C = 0.756
                          EXISTING + APPROVED    LEVEL OF SERVICE =   C
-------------------------------------------------------------------------
 N      2     1 1 0 0 0 0    768     3040   0.253  0.036   0.289      879
 E      2     2 0 0 0 0 0    347     3015   0.115  0.036   0.151      455
 S      1     0 0 1 0 0 0     52     1780   0.029  0.018   0.047       84
 W      4     0 0 3 1 0 0   2288     7111   0.322  0.072   0.394     2802
                                        LT = 0.119
TOTALS  9                   3455            0.838                    4220
                                       1 - 0.838 = 0.162 /  9 = 0.018
                                                             V/C = 0.819
                 EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   D
=========================================================================
( 3455 - 3160 )/ 3160 =   9.34 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                          LEVEL OF SERVICE ANALYSIS
=======================================================================
LOCATION:       MONROE & STEVENS CREEK
MESSAGE:        CUMULATIVE CONDITIONS  SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:      SATURDAY PEAK          N-S      46.50    8.50
COUNT DATE:     7/19/97                E-W      71.50    7.50
ANAL. DATE:     7/2/97
ANAL. INIT:     RD                     CYCLE LENGTH =  134
GROWTH FACTOR % :    0.0               LOST TIME    =  0.119
---------------------------------------------------------------------
LEG  PATTERN       LANE              APPROVED      PROJECT          TOTAL
                  COUNTS               TRIPS        TRIPS            TRIPS
     LSTSRO    LT  THRU   RT      LT THRU  RT     LT THRU RT     LT  THRU   RT
 N   110010   740    25  279       0    3  22     58    0  0    798    28  301
 E   203010   164  1268  908     109  106   0     74  353 58    347  1727  966
 S   101010    24    40  157      20   12 299      0    0 54     44    52  510
 W   203010   137  1989   16      81   57   5      0  277  0    218  2323   21
=====================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
              L S T S R O                             LANE     G/C
=====================================================================
 N      2     1 1 0 0 0 0     765     3037   0.252   0.045   0.297     902
 E      2     2 0 0 0 0 0     164     3015   0.054   0.045   0.099     298
 S      1     0 0 1 0 0 0      40     1780   0.022   0.023   0.045      80
 W      3     0 0 3 0 0 0    1989     5340   0.372   0.068   0.440    2350
                                         LT = 0.119
TOTALS  8                    2958            0.819                    3630
                                     1 - 0.819 = 0.181 /  8 = 0.023
                                                             V/C = 0.815
                                EXISTING          LEVEL OF SERVICE =  D
---------------------------------------------------------------------
 N      2     1 1 0 0 0 0     768     3040   0.253   0.031   0.284     863
 E      2     2 0 0 0 0 0     273     3015   0.091   0.031   0.122     368
 S      1     0 0 1 0 0 0      52     1780   0.029   0.016   0.045      80
 W      3     0 0 3 0 0 0    2046     5340   0.383   0.047   0.430    2296
                                         LT = 0.119
TOTALS  8                    3139            0.875                    3607
                                     1 - 0.875 = 0.125 /  8 = 0.016
                                                             V/C = 0.870
                             EXISTING + APPROVED     LEVEL OF SERVICE =  D
---------------------------------------------------------------------
 N      2     1 1 0 0 0 0     826     3038   0.272   0.007   0.279     848
 E      2     2 0 0 0 0 0     347     3015   0.115   0.007   0.122     368
 S      1     0 0 1 0 0 0      52     1780   0.029   0.004   0.033      59
 W      3     0 0 3 0 0 0    2323     5340   0.435   0.011   0.446    2382
                                         LT = 0.119
TOTALS  8                    3548            0.970                    3657
                                     1 - 0.970 = 0.030 /  8 = 0.004
                                                             V/C = 0.970
                   EXISTING + APPROVED + PROJECT     LEVEL OF SERVICE =  E
=====================================================================
( 3548 - 3139 )/ 3139 =  13.03 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

E

```
                             LEVEL OF SERVICE ANALYSIS
===============================================================================
LOCATION:       MONROE & STEVENS CREEK
MESSAGE:        CUMULATIVE SATURDAY     SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:      PM    MITIGATION        N-S      46.50     8.50
COUNT DATE:     7/19/97                 E-W      71.50     7.50
ANAL. DATE:     7/2/97
ANAL. INIT:     RD                      CYCLE LENGTH =  134
GROWTH FACTOR % :     0.0               LOST TIME    =  0.119
-----------------------------------------------------------------------------
LEG  PATTERN       LANE              APPROVED       PROJECT           TOTAL
                  COUNTS               TRIPS          TRIPS            TRIPS
     LSTSRO     LT   THRU   RT     LT THRU  RT    LT THRU RT      LT  THRU   RT
 N   110010    740    25   279      0    3  22    58    0   0     798    28  301
 E   203010    164  1268   908    109  106   0    74  353  58     347  1727  966
 S   101010     24    40   157     20   12 299     0    0  54      44    52  510
 W   203100    137  1989    16     81   57   5     0  277   0     218  2323   21
=============================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.    C. CAP.
               L S T S R O                              LANE    G/C
=============================================================================
 N       2    1 1 0 0 0 0     765     3037    0.252   0.060   0.312     948
 E       2    2 0 0 0 0 0     164     3015    0.054   0.060   0.114     344
 S       1    0 0 1 0 0 0      40     1780    0.022   0.030   0.052      93
 W       4    0 0 3 1 0 0    2005     7112    0.282   0.120   0.402    2859
                                           LT = 0.119
TOTALS   9                   2974                 0.729                  4244
                                         1 - 0.729 = 0.271 /  9 = 0.030
                                                               V/C = 0.701
                                 EXISTING          LEVEL OF SERVICE =   C
-----------------------------------------------------------------------------
 N       2    1 1 0 0 0 0     768     3040    0.253   0.048   0.301     915
 E       2    2 0 0 0 0 0     273     3015    0.091   0.048   0.139     419
 S       1    0 0 1 0 0 0      52     1780    0.029   0.024   0.053      94
 W       4    0 0 3 1 0 0    2067     7110    0.291   0.096   0.387    2752
                                           LT = 0.119
TOTALS   9                   3160                 0.783                  4180
                                         1 - 0.783 = 0.217 /  9 = 0.024
                                                               V/C = 0.756
                             EXISTING + APPROVED   LEVEL OF SERVICE =   C
-----------------------------------------------------------------------------
 N       2    1 1 0 0 0 0     826     3038    0.272   0.030   0.302     917
 E       2    2 0 0 0 0 0     347     3015    0.115   0.030   0.145     437
 S       1    0 0 1 0 0 0      52     1780    0.029   0.015   0.044      78
 W       4    0 0 3 1 0 0    2344     7111    0.330   0.060   0.390    2773
                                           LT = 0.119
TOTALS   9                   3569                 0.865                  4205
                                         1 - 0.865 = 0.135 /  9 = 0.015
                                                               V/C = 0.849
                 EXISTING + APPROVED + PROJECT     LEVEL OF SERVICE =   D
=============================================================================
( 3569 - 3160 )/ 3160 =  12.94 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

12/11/97

INTERSECTION: Stevens Creek/Redwood
PEAK HOUR: Saturday Peak Hour
COUNT DATE: 9/27/97
GROWTH
BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

Alternative Access at Dudley Only

	SCENARIO 6 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNTRY PROJECT TRIPS (P2)			TOTAL TRIPS (P4)		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	248	0	222	0	0	0	56	0	69	0	0	0	56	0	69
East	59	1541	238	114	82	0	0	0	56	0	297	0	0	297	56
South	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
West	207	1736	24	0	95	8	69	0	0	0	221	0	69	221	0

	E + G			SCENARIO 7 BACKGROUND E + G + A			SCENARIO 8 PROJECT E+G+A+P1			SCENARIO 9 CUMULATIVE E+G+A+P1+P2		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	248	0	222	248	0	222	248	0	222	304	0	291
East	59	1541	238	173	1623	238	173	1920	238	173	1920	294
South	0	0	0	0	0	0	0	0	0	0	0	0
West	207	1736	24	207	1831	32	207	2052	32	276	2052	32

97-036

```
                         LEVEL OF SERVICE ANALYSIS
==============================================================================
LOCATION:       REDWOOD & STEVENS CREEK
MESSAGE:        PROJECT CONDITIONS     SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:      SATURDAY PEAK          N-S      40.00     3.00
COUNT DATE:     9/27/97                E-W      90.00     6.50
ANAL. DATE:     7/2/97
ANAL. INIT:     RD                     CYCLE LENGTH =  139.5
GROWTH FACTOR % :    0.0               LOST TIME    =  0.068
----------------------------------------------------------------------------
LEG  PATTERN      LANE              APPROVED    PROJECT          TOTAL
                 COUNTS              TRIPS       TRIPS           TRIPS
     LSTSRO     LT   THRU   RT     LT THRU  RT   LT THRU RT     LT  THRU   RT
 N   200010    248      0  222      0    0   0    0    0  0    248     0  222
 E   103010     59   1541  238    114   82   0    0  297  0    173  1920  238
 S   000000      0      0    0      4    0   0    0    0  0      4     0    0
 W   203000    207   1736   24      0   95   8    0  221  0    207  2052   32
============================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   V/C    ADJ./   ADJ.   C. CAP.
              L S T S R O                            LANE    V/C
============================================================================
 N      2     2 0 0 0 0 0    248     3015    0.082   0.163   0.245    739
 E      1     1 0 0 0 0 0     59     1675    0.035   0.082   0.117    196
 S      0     0 0 0 0 0 0      0        0    0.000   0.000   0.000      0
 W      3     0 0 3 0 0 0   1736     5340    0.325   0.245   0.570   3044
                                         LT = 0.068
TOTALS  6                   2043             0.510                   3979
                                       1 - 0.510 = 0.490 /  6 = 0.082
                                                             V/C = 0.513
                                  EXISTING          LEVEL OF SERVICE =   A
----------------------------------------------------------------------------
 N      2     2 0 0 0 0 0    248     3015    0.082   0.135   0.217    654
 E      1     1 0 0 0 0 0    173     1675    0.103   0.067   0.170    285
 S      0     0 0 0 0 0 0      0        0    0.000   0.000   0.000      0
 W      3     0 0 3 0 0 0   1831     5340    0.343   0.202   0.545   2910
                                         LT = 0.068
TOTALS  6                   2252             0.596                   3849
                                       1 - 0.596 = 0.404 /  6 = 0.067
                                                             V/C = 0.585
                              EXISTING + APPROVED     LEVEL OF SERVICE =   A
----------------------------------------------------------------------------
 N      2     2 0 0 0 0 0    248     3015    0.082   0.121   0.203    612
 E      1     1 0 0 0 0 0    173     1675    0.103   0.060   0.163    273
 S      0     0 0 0 0 0 0      0        0    0.000   0.000   0.000      0
 W      3     0 0 3 0 0 0   2052     5340    0.384   0.181   0.565   3017
                                         LT = 0.068
TOTALS  6                   2473             0.637                   3902
                                       1 - 0.637 = 0.363 /  6 = 0.060
                                                             V/C = 0.634
                  EXISTING + APPROVED + PROJECT     LEVEL OF SERVICE =   B
============================================================================
( 2473 - 2252 )/ 2252 =   9.81 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

```
                        LEVEL OF SERVICE ANALYSIS
========================================================================
LOCATION:       REDWOOD & STEVENS CREEK
MESSAGE:        CUMULATIVE CONDITIONS  SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:      SATURDAY PEAK          N-S      40.00    3.00
COUNT DATE:     9/27/97                E-W      90.00    6.50
ANAL. DATE:     7/2/97
ANAL. INIT:     RD                     CYCLE LENGTH =  139.5
GROWTH FACTOR % :     0.0              LOST TIME    =  0.068
----------------------------------------------------------------------
LEG  PATTERN      LANE              APPROVED      PROJECT         TOTAL
                 COUNTS               TRIPS         TRIPS          TRIPS
     LSTSRO     LT  THRU   RT     LT THRU  RT     LT THRU RT     LT  THRU   RT
 N   200010    248     0  222      0    0   0     56   0  59    304     0  281
 E   103010     59  1541  238    114   82   0      0 297  56    173  1920  294
 S   000000      0     0    0      0    0   0      0   0   0      0     0    0
 W   203000    207  1736   24      0   95   8     69 221   0    276  2052   32
======================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./   ADJ.   C. CAP.
               L S T S R O                            LANE    G/C
======================================================================
 N      2     2 0 0 0 0 0     248     3015   0.082  0.163  0.245     739
 E      1     1 0 0 0 0 0      59     1675   0.035  0.082  0.117     196
 S      0     0 0 0 0 0 0       0        0   0.000  0.000  0.000       0
 W      3     0 0 3 0 0 0    1736     5340   0.325  0.245  0.570    3044
                                         LT = 0.068
TOTALS  6                    2043            0.510                  3979
                                     1 - 0.510 = 0.490 /  6 = 0.082
                                                            V/C = 0.513
                                EXISTING          LEVEL OF SERVICE =  A
----------------------------------------------------------------------
 N      2     2 0 0 0 0 0     248     3015   0.082  0.135  0.217     654
 E      1     1 0 0 0 0 0     173     1675   0.103  0.067  0.170     285
 S      0     0 0 0 0 0 0       0        0   0.000  0.000  0.000       0
 W      3     0 0 3 0 0 0    1831     5340   0.343  0.202  0.545    2910
                                         LT = 0.068
TOTALS  6                    2252            0.596                  3849
                                     1 - 0.596 = 0.404 /  6 = 0.067
                                                            V/C = 0.585
                           EXISTING + APPROVED    LEVEL OF SERVICE =  A
----------------------------------------------------------------------
 N      2     2 0 0 0 0 0     304     3015   0.101  0.115  0.216     651
 E      1     1 0 0 0 0 0     173     1675   0.103  0.057  0.160     268
 S      0     0 0 0 0 0 0       0        0   0.000  0.000  0.000       0
 W      3     0 0 3 0 0 0    2052     5340   0.384  0.172  0.556    2969
                                         LT = 0.068
TOTALS  6                    2529            0.656                  3888
                                     1 - 0.656 = 0.344 /  6 = 0.057
                                                            V/C = 0.650
                 EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =  B
======================================================================
( 2529 - 2252 )/ 2252 =  12.30 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

INTERSECTION: Stevens Creek/Emporium **Alternative Access at Dudley Only**
PEAK HOUR: Saturday Peak Hour
COUNT DATE: 9/27/97
GROWTH
BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

	SCENARIO 6 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNTRY PROJECT TRIPS (P2)			TOTAL TRIPS (P4)		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	178	46	196	0	0	0	0	2	0	0	0	0	0	2	0
East	177	1502	99	0	86	0	0	69	0	297	0	0	297	69	0
South	48	87	223	0	0	0	0	2	0	0	0	221	0	2	221
West	374	1576	63	0	103	0	0	69	0	0	0	0	0	69	0

	E + G			SCENARIO 7 BACKGROUND E + G + A			SCENARIO 8 PROJECT E+G+A+P1			SCENARIO 9 CUMULATIVE E+G+A+P1+P2		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	178	46	196	178	46	196	178	46	196	178	48	196
East	177	1502	99	177	1588	99	474	1588	99	474	1657	99
South	48	87	223	48	87	223	48	87	444	48	89	444
West	374	1576	63	374	1679	63	374	1679	63	374	1748	63

```
                            LEVEL OF SERVICE ANALYSIS
==========================================================================
LOCATION:      EMPORIUM & STEVENS CREEK
MESSAGE:       PROJECT CONDITIONS      SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:     SATURDAY PEAK           N-S      34.00    4.00
COUNT DATE:    9/27/97                 E-W      88.00    8.00
ANAL. DATE:    7/2/97
ANAL. INIT:    RD                      CYCLE LENGTH =  134
GROWTH FACTOR % :    0.0               LOST TIME    =  0.090
------------------------------------------------------------------------
LEG  PATTERN      LANE            APPROVED     PROJECT         TOTAL
                 COUNTS             TRIPS       TRIPS          TRIPS
     LSTSRO     LT  THRU   RT    LT THRU  RT   LT THRU RT     LT  THRU  RT
 N   101010    178    46  196     0    0   0    0   0   0    178    46 196
 E   203010    177  1502   99     0   86   0  297   0   0    474  1588  99
 S   101010     48    87  223     0    0   0    0   0 221     48    87 444
 W   203010    374  1576   63     0  103   0    0   0   0    374  1679  63
========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./   ADJ.   C. CAP.
              L S T S R O                            LANE    V/C
========================================================================
 N      1     1 0 0 0 0 0     178     1675   0.106   0.050   0.156    261
 E      3     0 0 3 0 0 0    1502     5340   0.281   0.150   0.431   2302
 S      1     0 0 1 0 0 0      87     1780   0.049   0.050   0.099    176
 W      2     2 0 0 0 0 0     374     3015   0.124   0.100   0.224    675
                                          LT = 0.090
TOTALS  7                    2141              0.650                  3414
                                      1 - 0.650 = 0.350 /  7 = 0.050
                                                              V/C = 0.627
                                  EXISTING          LEVEL OF SERVICE =  B
------------------------------------------------------------------------
 N      1     1 0 0 0 0 0     178     1675   0.106   0.048   0.154    258
 E      3     0 0 3 0 0 0    1588     5340   0.297   0.143   0.440   2350
 S      1     0 0 1 0 0 0      87     1780   0.049   0.048   0.097    173
 W      2     2 0 0 0 0 0     374     3015   0.124   0.095   0.219    660
                                          LT = 0.090
TOTALS  7                    2227              0.666                  3441
                                      1 - 0.666 = 0.334 /  7 = 0.048
                                                              V/C = 0.647
                             EXISTING + APPROVED    LEVEL OF SERVICE =  B
------------------------------------------------------------------------
 N      1     1 0 0 0 0 0     178     1675   0.106   0.041   0.147    246
 E      2     2 0 0 0 0 0     474     3015   0.157   0.081   0.238    718
 S      1     0 0 1 0 0 0      87     1780   0.049   0.041   0.090    160
 W      3     0 0 3 0 0 0    1679     5340   0.314   0.122   0.436   2328
                                          LT = 0.090
TOTALS  7                    2418              0.716                  3452
                                      1 - 0.716 = 0.284 /  7 = 0.041
                                                              V/C = 0.700
                   EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =  C
========================================================================
( 2418 - 2227 )/ 2227 =    8.58 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

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                              LEVEL OF SERVICE ANALYSIS
=========================================================================
LOCATION:        EMPORIUM & STEVENS CREEK
MESSAGE:         CUMULATIVE CONDITIONS  SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:       SATURDAY PEAK          N-S      34.00    4.00
COUNT DATE:      9/27/97                E-W      88.00    8.00
ANAL. DATE:      7/2/97
ANAL. INIT:      RD                     CYCLE LENGTH =  134
GROWTH FACTOR % :     0.0               LOST TIME    =  0.090
-----------------------------------------------------------------------
LEG  PATTERN      LANE             APPROVED      PROJECT          TOTAL
                 COUNTS              TRIPS         TRIPS           TRIPS
     LSTSRO    LT  THRU   RT     LT THRU  RT    LT THRU RT     LT  THRU   RT
 N   101010   178    46  196      0    0   0     0   2   0    178    48  196
 E   203010   177  1502   99      0   86   0   297  69   0    474  1657   99
 S   101010    48    87  223      0    0   0     0   2 221     48    89  444
 W   203010   374  1576   63      0  103   0     0  69   0    374  1748   63
=======================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
              L S T S R O                             LANE     G/C
=======================================================================
 N      1     1 0 0 0 0 0     178     1675   0.106   0.050   0.156     261
 E      3     0 0 3 0 0 0    1502     5340   0.281   0.150   0.431    2302
 S      1     0 0 1 0 0 0      87     1780   0.049   0.050   0.099     176
 W      2     2 0 0 0 0 0     374     3015   0.124   0.100   0.224     675
                                         LT = 0.090
TOTALS  7                    2141            0.650                    3414
                                     1 - 0.650 = 0.350 /  7 = 0.050
                                                              V/C = 0.627
                             EXISTING            LEVEL OF SERVICE =   B
-----------------------------------------------------------------------
 N      1     1 0 0 0 0 0     178     1675   0.106   0.048   0.154     258
 E      3     0 0 3 0 0 0    1588     5340   0.297   0.143   0.440    2350
 S      1     0 0 1 0 0 0      87     1780   0.049   0.048   0.097     173
 W      2     2 0 0 0 0 0     374     3015   0.124   0.095   0.219     660
                                         LT = 0.090
TOTALS  7                    2227            0.666                    3441
                                     1 - 0.666 = 0.334 /  7 = 0.048
                                                              V/C = 0.647
                         EXISTING + APPROVED     LEVEL OF SERVICE =   B
-----------------------------------------------------------------------
 N      1     1 0 0 0 0 0     178     1675   0.106   0.039   0.145     243
 E      2     2 0 0 0 0 0     474     3015   0.157   0.077   0.234     706
 S      1     0 0 1 0 0 0      89     1780   0.050   0.039   0.089     158
 W      3     0 0 3 0 0 0    1748     5340   0.327   0.116   0.443    2366
                                         LT = 0.090
TOTALS  7                    2489            0.730                    3473
                                     1 - 0.730 = 0.270 /  7 = 0.039
                                                              V/C = 0.717
                EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   C
=======================================================================
( 2489 - 2227 )/ 2227 =  11.76 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

INTERSECTION: Winchester/Olsen

PEAK HOUR: Saturday Peak Hour

COUNT DATE: 10/04/97

GROWTH BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

Alternative Access at Dudley Only

	SCENARIO 6 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNTRY PROJECT TRIPS (P2)			TOTAL TRIPS (P4)		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	78	1138	101	0	16	0	0	32	0	16	12	0	16	44	0
East	151	14	108	0	0	0	0	0	0	69	0	16	69	0	16
South	98	1208	154	0	51	0	0	32	0	0	12	91	0	44	91
West	76	23	236	0	0	0	0	0	0	0	0	0	0	0	0

	E + G			SCENARIO 7 BACKGROUND E + G + A			SCENARIO 8 PROJECT E+G+A+P2			SCENARIO 9 CUMULATIVE E+G+A+P1+P2		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	78	1138	101	78	1154	101	94	1166	101	94	1198	101
East	151	14	108	151	14	108	220	14	124	220	14	124
South	98	1208	154	98	1259	154	98	1271	245	98	1303	245
West	76	23	236	76	23	236	76	23	236	76	23	236

97-036

E

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                        LEVEL OF SERVICE ANALYSIS
=========================================================================
LOCATION:       WINCHESTER & OLSEN
MESSAGE:        PROJECT CONDITIONS     SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:      SATURDAY PEAK          N-S      90.00    6.50
COUNT DATE:     10/4/97                E-W      22.00    3.00
ANAL. DATE:     7/2/97
ANAL. INIT:     RD                     CYCLE LENGTH =  121.5
GROWTH FACTOR % :    0.0               LOST TIME    =  0.078
-----------------------------------------------------------------------
LEG  PATTERN      LANE             APPROVED    PROJECT          TOTAL
                 COUNTS              TRIPS       TRIPS           TRIPS
     LSTSRO    LT   THRU   RT    LT THRU  RT   LT THRU RT     LT  THRU   RT
 N   102100    78   1138  101     0   16   0   16   12   0     94  1166  101
 E   101010   151     14  108     0    0   0   69    0  16    220    14  124
 S   102100    98   1208  154     0   51   0    0   12  91     98  1271  245
 W   100100    76     23  236     0    0   0    0    0   0     76    23  236
=======================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
               L S T S R O                            LANE    G/C
=======================================================================
 N      1     1 0 0 0 0 0      78     1675   0.047   0.062   0.109     183
 E      1     1 0 0 0 0 0     151     1675   0.090   0.062   0.152     255
 S      3     0 0 2 1 0 0    1362     5299   0.257   0.187   0.444    2353
 W      1     0 0 0 1 0 0     259     1684   0.154   0.062   0.216     364
                                        LT = 0.078
TOTALS  6                    1850            0.626                    3155
                                      1 - 0.626 = 0.374 /  6 = 0.062
                                                            V/C = 0.586
                                   EXISTING          LEVEL OF SERVICE =   A
-----------------------------------------------------------------------
 N      1     1 0 0 0 0 0      78     1675   0.047   0.061   0.108     181
 E      1     1 0 0 0 0 0     151     1675   0.090   0.061   0.151     253
 S      3     0 0 2 1 0 0    1413     5300   0.267   0.182   0.449    2380
 W      1     0 0 0 1 0 0     259     1684   0.154   0.061   0.215     362
                                        LT = 0.078
TOTALS  6                    1901            0.636                    3176
                                      1 - 0.636 = 0.364 /  6 = 0.061
                                                            V/C = 0.599
                             EXISTING + APPROVED     LEVEL OF SERVICE =   A
-----------------------------------------------------------------------
 N      1     1 0 0 0 0 0      94     1675   0.056   0.049   0.105     176
 E      1     1 0 0 0 0 0     220     1675   0.131   0.049   0.180     301
 S      3     0 0 2 1 0 0    1516     5288   0.287   0.147   0.434    2295
 W      1     0 0 0 1 0 0     259     1684   0.154   0.049   0.203     342
                                        LT = 0.078
TOTALS  6                    2089            0.706                    3114
                                      1 - 0.706 = 0.294 /  6 = 0.049
                                                            V/C = 0.671
                  EXISTING + APPROVED + PROJECT     LEVEL OF SERVICE =   B
=======================================================================
( 2089 - 1901 )/ 1901 =   9.89 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
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97-036

```
                              LEVEL OF SERVICE ANALYSIS
========================================================================
LOCATION:     WINCHESTER & OLSEN
MESSAGE:      CUMULATIVE CONDITIONS  SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:    SATURDAY PEAK          N-S      90.00    6.50
COUNT DATE:   10/4/97                E-W      22.00    3.00
ANAL. DATE:   7/2/97
ANAL. INIT:   RD                     CYCLE LENGTH =  121.5
GROWTH FACTOR % :    0.0             LOST TIME    =  0.078
------------------------------------------------------------------------
LEG  PATTERN       LANE            APPROVED     PROJECT          TOTAL
                  COUNTS             TRIPS       TRIPS           TRIPS
     LSTSRO    LT   THRU   RT    LT THRU  RT    LT THRU RT    LT  THRU   RT
 N   102100    78   1138  101     0   16   0    16  44   0    94  1198  101
 E   101010   151     14  108     0    0   0    69   0  16   220    14  124
 S   102100    98   1208  154     0   51   0     0  44  91    98  1303  245
 W   100100    76     23  236     0    0   0     0   0   0    76    23  236
========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./   ADJ.   C. CAP.
               L S T S R O                            LANE    G/C
========================================================================
 N      1     1 0 0 0 0 0      78     1675   0.047   0.062   0.109    183
 E      1     1 0 0 0 0 0     151     1675   0.090   0.062   0.152    255
 S      3     0 0 2 1 0 0    1362     5299   0.257   0.187   0.444   2353
 W      1     0 0 0 1 0 0     259     1684   0.154   0.062   0.216    364
                                          LT = 0.078
TOTALS  6                    1850            0.626                   3155
                                         1 - 0.626 = 0.374 /  6 = 0.062
                                                             V/C = 0.586
                                  EXISTING         LEVEL OF SERVICE =   A
------------------------------------------------------------------------
 N      1     1 0 0 0 0 0      78     1675   0.047   0.061   0.108    181
 E      1     1 0 0 0 0 0     151     1675   0.090   0.061   0.151    253
 S      3     0 0 2 1 0 0    1413     5300   0.267   0.182   0.449   2380
 W      1     0 0 0 1 0 0     259     1684   0.154   0.061   0.215    362
                                          LT = 0.078
TOTALS  6                    1901            0.636                   3176
                                         1 - 0.636 = 0.364 /  6 = 0.061
                                                             V/C = 0.599
                             EXISTING + APPROVED   LEVEL OF SERVICE =   A
------------------------------------------------------------------------
 N      1     1 0 0 0 0 0      94     1675   0.056   0.048   0.104    174
 E      1     1 0 0 0 0 0     220     1675   0.131   0.048   0.179    300
 S      3     0 0 2 1 0 0    1548     5289   0.293   0.144   0.437   2311
 W      1     0 0 0 1 0 0     259     1684   0.154   0.048   0.202    340
                                          LT = 0.078
TOTALS  6                    2121            0.712                   3125
                                         1 - 0.712 = 0.288 /  6 = 0.048
                                                             V/C = 0.679
                  EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   B
========================================================================
( 2121 - 1901 )/ 1901 =  11.57 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

INTERSECTION: Winchester/Tisch
PEAK HOUR: Saturday Peak Hour
COUNT DATE: 9/27/97
GROWTH
BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

Alternative Access at Dudley Only

	SCENARIO 6 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNTRY PROJECT TRIPS (P2)			TOTAL TRIPS (P4)		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	25	1242	366	0	16	5	0	24	22	0	31	50	0	55	72
East	108	40	26	57	0	0	0	0	0	0	33	0	0	33	0
South	283	1374	148	34	51	0	0	46	0	0	103	52	0	149	52
West	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	E + G			SCENARIO 7 BACKGROUND E + G + A			SCENARIO 8 PROJECT E+G+A+P2			SCENARIO 9 CUMULATIVE E+G+A+P1+P2		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	25	1242	366	25	1258	371	25	1289	421	25	1313	443
East	108	40	26	165	40	26	165	73	26	165	73	26
South	283	1374	148	317	1425	148	317	1528	200	317	1574	200
West	0	0	0	0	0	0	0	0	0	0	0	0

```
                              LEVEL OF SERVICE ANALYSIS
=======================================================================
LOCATION:       WINCHESTER & TISCH
MESSAGE:        PROJECT CONDITIONS      SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:      SATURDAY PEAK           N-S       95.00     6.50
COUNT DATE:     9/27/97                 E-W       20.00     3.00
ANAL. DATE:     7/2/97
ANAL. INIT:     RD                      CYCLE LENGTH =  124.5
GROWTH FACTOR % :    0.0                LOST TIME    =  0.076
----------------------------------------------------------------------
LEG  PATTERN      LANE            APPROVED      PROJECT          TOTAL
                 COUNTS             TRIPS        TRIPS            TRIPS
     LSTSRO    LT  THRU   RT     LT THRU  RT   LT THRU RT      LT  THRU   RT
 N   102100    25  1242  366      0   16   5    0  31  50      25  1289  421
 E   100002   108    40   26     57    0   0    0  33   0     165    73   26
 S   102100   283  1374  148     34   51   0    0 103  52     317  1528  200
 W   000000     0     0    0      0    0   0    0   0   0       0     0    0
======================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./   ADJ.    C. CAP.
              L S T S R O                            LANE    G/C
======================================================================
 N      3    0 0 2 1 0 0    1608     5277    0.305   0.197   0.502    2649
 E      2    1 0 0 0 0 2     174     3116    0.056   0.131   0.187     583
 S      1    1 0 0 0 0 0     283     1675    0.169   0.066   0.235     394
 W      0    0 0 0 0 0 0       0        0    0.000   0.000   0.000       0
                                       LT = 0.076
TOTALS  6                   2065             0.606                    3626
                                    1 - 0.606 = 0.394 /  6 = 0.066
                                                            V/C = 0.569
                              EXISTING          LEVEL OF SERVICE =   A
----------------------------------------------------------------------
 N      3    0 0 2 1 0 0    1629     5277    0.309   0.176   0.485    2559
 E      2    1 0 0 0 0 2     231     3098    0.075   0.117   0.192     595
 S      1    1 0 0 0 0 0     317     1675    0.189   0.059   0.248     415
 W      0    0 0 0 0 0 0       0        0    0.000   0.000   0.000       0
                                       LT = 0.076
TOTALS  6                   2177             0.649                    3569
                                    1 - 0.649 = 0.351 /  6 = 0.059
                                                            V/C = 0.610
                          EXISTING + APPROVED    LEVEL OF SERVICE =   B
----------------------------------------------------------------------
 N      3    0 0 2 1 0 0    1710     5275    0.324   0.163   0.487    2569
 E      2    1 0 0 0 0 2     264     3136    0.084   0.109   0.193     605
 S      1    1 0 0 0 0 0     317     1675    0.189   0.054   0.243     407
 W      0    0 0 0 0 0 0       0        0    0.000   0.000   0.000       0
                                       LT = 0.076
TOTALS  6                   2291             0.673                    3581
                                    1 - 0.673 = 0.327 /  6 = 0.054
                                                            V/C = 0.640
                  EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   B
======================================================================
( 2291 - 2177 )/ 2177 =   5.24 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

E

```
                          LEVEL OF SERVICE ANALYSIS
=============================================================================
LOCATION:       WINCHESTER & TISCH
MESSAGE:        CUMULATIVE CONDITIONS  SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:      SATURDAY PEAK          N-S      95.00     6.50
COUNT DATE:     9/27/97                E-W      20.00     3.00
ANAL. DATE:     7/2/97
ANAL. INIT:     RD                     CYCLE LENGTH =  124.5
GROWTH FACTOR % :     0.0              LOST TIME     =  0.076
---------------------------------------------------------------------------
LEG  PATTERN       LANE              APPROVED       PROJECT          TOTAL
                  COUNTS               TRIPS         TRIPS            TRIPS
     LSTSRO     LT   THRU   RT      LT THRU  RT     LT THRU RT      LT  THRU   RT
 N   102100     25   1242  366       0   16   5      0  55  72      25  1313  443
 E   100002    108     40   26      57    0   0      0  33   0     165    73   26
 S   102100    283   1374  148      34   51   0      0 149  52     317  1574  200
 W   000000      0      0    0       0    0   0      0   0   0       0     0    0
===========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.    G/C     ADJ./    ADJ.   C. CAP.
              L S T S R O                               LANE     G/C
===========================================================================
 N      3     0 0 2 1 0 0    1608     5277    0.305   0.197    0.502    2649
 E      2     1 0 0 0 0 2     174     3116    0.056   0.131    0.187     583
 S      1     1 0 0 0 0 0     283     1675    0.169   0.066    0.235     394
 W      0     0 0 0 0 0 0       0        0    0.000   0.000    0.000       0
                                         LT = 0.076
TOTALS  6                    2065             0.606                     3626
                                      1 - 0.606 = 0.394 /  6 = 0.066
                                                            V/C = 0.569
                                   EXISTING         LEVEL OF SERVICE =   A
---------------------------------------------------------------------------
 N      3     0 0 2 1 0 0    1629     5277    0.309   0.176    0.485    2559
 E      2     1 0 0 0 0 2     231     3098    0.075   0.117    0.192     595
 S      1     1 0 0 0 0 0     317     1675    0.189   0.059    0.248     415
 W      0     0 0 0 0 0 0       0        0    0.000   0.000    0.000       0
                                         LT = 0.076
TOTALS  6                    2177             0.649                     3569
                                      1 - 0.649 = 0.351 /  6 = 0.059
                                                            V/C = 0.610
                              EXISTING + APPROVED    LEVEL OF SERVICE =   B
---------------------------------------------------------------------------
 N      3     0 0 2 1 0 0    1756     5274    0.333   0.159    0.492    2595
 E      2     1 0 0 0 0 2     264     3136    0.084   0.106    0.190     596
 S      1     1 0 0 0 0 0     317     1675    0.189   0.053    0.242     405
 W      0     0 0 0 0 0 0       0        0    0.000   0.000    0.000       0
                                         LT = 0.076
TOTALS  6                    2337             0.682                     3596
                                      1 - 0.682 = 0.318 /  6 = 0.053
                                                            V/C = 0.650
                    EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   B
===========================================================================
( 2337 - 2177 )/ 2177 =   7.35 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

12/11/9

INTERSECTION: Monroe Stevens Creek — **Alternative Access at Dudley & Redwood**
PEAK HOUR: Saturday Peak Hour
COUNT DATE: 7/19/97
GROWTH
BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

	SCENARIO 6 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNTRY PROJECT TRIPS (P2)			TOTAL TRIPS (P4)		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	740	25	279	0	3	22	58	0	0	0	0	0	58	0	0
East	164	1268	908	109	106	0	0	56	58	124	248	0	124	304	58
South	24	40	157	20	12	299	0	0	0	0	0	85	0	0	85
West	137	1989	16	81	57	5	0	56	0	0	190	0	0	246	0

	E + G			SCENARIO 7 BACKGROUND E + G + A			SCENARIO 8 PROJECT E+G+A+P1			SCENARIO 9 CUMULATIVE E+G+A+P1+P2		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	740	25	279	740	28	301	740	28	301	798	28	301
East	164	1268	908	273	1374	908	397	1622	908	397	1678	966
South	24	40	157	44	52	456	44	52	541	44	52	541
West	137	1989	16	218	2046	21	218	2236	21	218	2292	21

97-036

E

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                         LEVEL OF SERVICE ANALYSIS
========================================================================
LOCATION:       MONROE & STEVENS CREEK
MESSAGE:        PROJECT CONDITIONS     SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:      SATURDAY PEAK          N-S      46.50    8.50
COUNT DATE:     7/19/97                E-W      71.50    7.50
ANAL. DATE:     7/2/97
ANAL. INIT:     RD                     CYCLE LENGTH =  134
GROWTH FACTOR % :    0.0               LOST TIME    =  0.119
----------------------------------------------------------------------
LEG  PATTERN      LANE             APPROVED     PROJECT          TOTAL
                 COUNTS              TRIPS       TRIPS           TRIPS
     LSTSRO    LT  THRU   RT     LT THRU  RT   LT THRU RT      LT  THRU  RT
 N   110010   740    25  279      0    3  22    0    0   0     740    28 301
 E   203010   164  1268  908    109  106   0  124  248   0     397  1622 908
 S   101010    24    40  157     20   12 299    0    0  85      44    52 541
 W   203010   137  1989   16     81   57   5    0  190   0     218  2236  21
======================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./   ADJ.    C. CAP.
              L S T S R O                             LANE   G/C
======================================================================
 N      2     1 1 0 0 0 0     765     3037   0.252   0.045  0.297     902
 E      2     2 0 0 0 0 0     164     3015   0.054   0.045  0.099     298
 S      1     0 0 1 0 0 0      40     1780   0.022   0.023  0.045      80
 W      3     0 0 3 0 0 0    1989     5340   0.372   0.068  0.440    2350
                                          LT = 0.119
TOTALS  8                    2958            0.819                   3630
                                    1 - 0.819 = 0.181 /  8 = 0.023
                                                           V/C = 0.815
                               EXISTING          LEVEL OF SERVICE =  D
----------------------------------------------------------------------
 N      2     1 1 0 0 0 0     768     3040   0.253   0.031  0.284     863
 E      2     2 0 0 0 0 0     273     3015   0.091   0.031  0.122     368
 S      1     0 0 1 0 0 0      52     1780   0.029   0.016  0.045      80
 W      3     0 0 3 0 0 0    2046     5340   0.383   0.047  0.430    2296
                                          LT = 0.119
TOTALS  8                    3139            0.875                   3607
                                    1 - 0.875 = 0.125 /  8 = 0.016
                                                           V/C = 0.870
                          EXISTING + APPROVED    LEVEL OF SERVICE =  D
----------------------------------------------------------------------
 N      2     1 1 0 0 0 0     768     3040   0.253   0.012  0.265     806
 E      2     2 0 0 0 0 0     397     3015   0.132   0.012  0.144     434
 S      1     0 0 1 0 0 0      52     1780   0.029   0.006  0.035      62
 W      3     0 0 3 0 0 0    2236     5340   0.419   0.018  0.437    2334
                                          LT = 0.119
TOTALS  8                    3453            0.952                   3636
                                    1 - 0.952 = 0.048 /  8 = 0.006
                                                           V/C = 0.950
                 EXISTING + APPROVED + PROJECT   LEVEL OF SERVICE =  E
======================================================================
( 3453 - 3139 )/ 3139 =  10.00 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
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97-036

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                         LEVEL OF SERVICE ANALYSIS
=======================================================================
LOCATION:        MONROE & STEVENS CREEK
MESSAGE:         PROJECT CONDITIONS      SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:       SATURDAY PEAK MITIGATED N-S       -6.50     8.50
COUNT DATE:      7/19/97                 E-W       71.50     7.50
ANAL. DATE:      7/2/97
ANAL. INIT:      RD                      CYCLE LENGTH =  134
GROWTH FACTOR % :     0.0                LOST TIME    =  0.119
---------------------------------------------------------------------
LEG  PATTERN       LANE            APPROVED     PROJECT          TOTAL
                  COUNTS             TRIPS       TRIPS           TRIPS
     LSTSRO     LT   THRU   RT    LT THRU  RT   LT THRU RT     LT  THRU   RT
 N   110010    740     25  279     0    3  22    0    0  0    740    28  301
 E   203010    164   1268  908   109  106   0  124  248  0    397  1622  908
 S   101010     24     40  157    20   12 299    0    0 85     44    52  541
 W   203100    137   1989   16    81   57   5    0  190  0    218  2236   21
=====================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
              L S T S R O                            LANE     G/C
=====================================================================
 N      2     1 1 0 0 0 0     765     3037   0.252   0.060   0.312     948
 E      2     2 0 0 0 0 0     164     3015   0.054   0.060   0.114     344
 S      1     0 0 1 0 0 0      40     1780   0.022   0.030   0.052      93
 W      4     0 0 3 1 0 0    2005     7112   0.282   0.120   0.402    2859
                                        LT = 0.119
TOTALS  9                    2974            0.729                    4244
                                    1 - 0.729 = 0.271 /  9 = 0.030
                                                          V/C = 0.701
                              EXISTING          LEVEL OF SERVICE =   C
---------------------------------------------------------------------
 N      2     1 1 0 0 0 0     768     3040   0.253   0.048   0.301     915
 E      2     2 0 0 0 0 0     273     3015   0.091   0.048   0.139     419
 S      1     0 0 1 0 0 0      52     1780   0.029   0.024   0.053      94
 W      4     0 0 3 1 0 0    2067     7110   0.291   0.096   0.387    2752
                                        LT = 0.119
TOTALS  9                    3160            0.783                    4180
                                    1 - 0.783 = 0.217 /  9 = 0.024
                                                          V/C = 0.756
                           EXISTING + APPROVED   LEVEL OF SERVICE =   C
---------------------------------------------------------------------
 N      2     1 1 0 0 0 0     768     3040   0.253   0.033   0.286     869
 E      2     2 0 0 0 0 0     397     3015   0.132   0.033   0.165     497
 S      1     0 0 1 0 0 0      52     1780   0.029   0.017   0.046      82
 W      4     0 0 3 1 0 0    2257     7111   0.317   0.067   0.384    2731
                                        LT = 0.119
TOTALS  9                    3474            0.850                    4179
                                    1 - 0.850 = 0.150 /  9 = 0.017
                                                          V/C = 0.831
                   EXISTING + APPROVED + PROJECT   LEVEL OF SERVICE =   D
=====================================================================
( 3474 - 3160 )/ 3160 =   9.94 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
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97-036

E

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                           LEVEL OF SERVICE ANALYSIS
=========================================================================
LOCATION:        MONROE & STEVENS CREEK
MESSAGE:         CUMULATIVE CONDITIONS  SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:       SATURDAY PEAK          N-S      46.50     8.50
COUNT DATE:      7/19/97                E-W      71.50     7.50
ANAL. DATE:      7/2/97
ANAL. INIT:      RD                     CYCLE LENGTH =  134
GROWTH FACTOR % :     0.0               LOST TIME    =  0.119
-----------------------------------------------------------------------
LEG  PATTERN      LANE            APPROVED      PROJECT         TOTAL
                 COUNTS             TRIPS        TRIPS          TRIPS
     LSTSRO    LT   THRU   RT    LT THRU  RT   LT THRU RT     LT  THRU   RT
N    110010   740    25   279     0    3  22   58    0  0    798    28  301
E    203010   164  1268   908   109  106   0  124  304 58    397  1678  966
S    101010    24    40   157    20   12 299    0    0 85     44    52  541
W    203010   137  1989    16    81   57   5    0  246  0    218  2292   21
=======================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
               L S T S R O                             LANE    G/C
=======================================================================
N       2     1 1 0 0 0 0     765     3037   0.252   0.045   0.297    902
E       2     2 0 0 0 0 0     164     3015   0.054   0.045   0.099    298
S       1     0 0 1 0 0 0      40     1780   0.022   0.023   0.045     80
W       3     0 0 3 0 0 0    1989     5340   0.372   0.068   0.440   2350
                                          LT = 0.119
TOTALS  8                    2958            0.819                   3630
                                      1 - 0.819 = 0.181 /  8 = 0.023
                                                           V/C = 0.815
                                 EXISTING          LEVEL OF SERVICE =  D
-----------------------------------------------------------------------
N       2     1 1 0 0 0 0     768     3040   0.253   0.031   0.284    863
E       2     2 0 0 0 0 0     273     3015   0.091   0.031   0.122    368
S       1     0 0 1 0 0 0      52     1780   0.029   0.016   0.045     80
W       3     0 0 3 0 0 0    2046     5340   0.383   0.047   0.430   2296
                                          LT = 0.119
TOTALS  8                    3139            0.875                   3607
                                      1 - 0.875 = 0.125 /  8 = 0.016
                                                           V/C = 0.870
                            EXISTING + APPROVED    LEVEL OF SERVICE =  D
-----------------------------------------------------------------------
N       2     1 1 0 0 0 0     826     3038   0.272   0.005   0.277    842
E       2     2 0 0 0 0 0     397     3015   0.132   0.005   0.137    413
S       1     0 0 1 0 0 0      52     1780   0.029   0.002   0.031     55
W       3     0 0 3 0 0 0    2292     5340   0.429   0.007   0.436   2328
                                          LT = 0.119
TOTALS  8                    3567            0.981                   3638
                                      1 - 0.981 = 0.019 /  8 = 0.002
                                                           V/C = 0.980
                 EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =  E
=======================================================================
( 3567 - 3139 )/ 3139 =  13.63 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
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97-036

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                              LEVEL OF SERVICE ANALYSIS
========================================================================
LOCATION:        MONROE & STEVENS CREEK
MESSAGE:         CUMULATIVE SATURDAY     SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:       PM   MITIGATION         N-S      46.50     8.50
COUNT DATE:      7/19/97                 E-W      71.50     7.50
ANAL. DATE:      7/2/97
ANAL. INIT:      RD                      CYCLE LENGTH =  134
GROWTH FACTOR % :    0.0                 LOST TIME    =  0.119
------------------------------------------------------------------------
LEG  PATTERN      LANE            APPROVED      PROJECT          TOTAL
                 COUNTS            TRIPS         TRIPS           TRIPS
     LSTSRO    LT  THRU   RT    LT THRU  RT   LT THRU RT     LT  THRU   RT
 N   110010   740    25  279     0    3  22   58    0   0    798    28  301
 E   203010   164  1268  908   109  106   0  124  304  58    397  1678  966
 S   101010    24    40  157    20   12 299    0    0  85     44    52  541
 W   203100   137  1989   16    81   57   5    0  246   0    218  2292   21
========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./   ADJ.   C. CAP.
              L S T S R O                            LANE    G/C
========================================================================
 N      2     1 1 0 0 0 0    765     3037    0.252   0.060   0.312    948
 E      2     2 0 0 0 0 0    164     3015    0.054   0.060   0.114    344
 S      1     0 0 1 0 0 0     40     1780    0.022   0.030   0.052     93
 W      4     0 0 3 1 0 0   2005     7112    0.282   0.120   0.402   2859
                                       LT =  0.119
TOTALS  9                   2974             0.729                   4244
                                    1 - 0.729 = 0.271 /  9 = 0.030
                                                           V/C = 0.701
                             EXISTING          LEVEL OF SERVICE =    C
------------------------------------------------------------------------
 N      2     1 1 0 0 0 0    768     3040    0.253   0.048   0.301    915
 E      2     2 0 0 0 0 0    273     3015    0.091   0.048   0.139    419
 S      1     0 0 1 0 0 0     52     1780    0.029   0.024   0.053     94
 W      4     0 0 3 1 0 0   2067     7110    0.291   0.096   0.387   2752
                                       LT =  0.119
TOTALS  9                   3160             0.783                   4180
                                    1 - 0.783 = 0.217 /  9 = 0.024
                                                           V/C = 0.756
                         EXISTING + APPROVED    LEVEL OF SERVICE =    C
------------------------------------------------------------------------
 N      2     1 1 0 0 0 0    826     3038    0.272   0.027   0.299    908
 E      2     2 0 0 0 0 0    397     3015    0.132   0.027   0.159    479
 S      1     0 0 1 0 0 0     52     1780    0.029   0.014   0.043     77
 W      4     0 0 3 1 0 0   2313     7111    0.325   0.055   0.380   2702
                                       LT =  0.119
TOTALS  9                   3588             0.877                   4166
                                    1 - 0.877 = 0.123 /  9 = 0.014
                                                           V/C = 0.861
               EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =    D
========================================================================
( 3588 - 3160 )/ 3160 =  13.54 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
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97-036

E.

12/11/97

INTERSECTION: Stevens Creek/Redwood
PEAK HOUR: Saturday Peak Hour
COUNT DATE: 9/27/97
GROWTH
BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

Alternative Access at Dudley & Redwood

APPROACH	SCENARIO 6 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNTRY PROJECT TRIPS (P2)			TOTAL TRIPS (P4)		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	248	0	222	0	0	0	56	0	69	0	0	0	56	0	69
East	59	1541	238	114	82	0	0	0	56	25	223	0	25	223	56
South	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
West	207	1736	24	0	95	8	69	0	0	0	174	0	69	174	0

APPROACH	E + G			SCENARIO 7 BACKGROUND E + G + A			SCENARIO 8 PROJECT E+G+A+P1			SCENARIO 9 CUMULATIVE E+G+A+P1+P2		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	248	0	222	248	0	222	248	0	222	304	0	291
East	59	1541	238	173	1623	238	198	1846	238	198	1846	294
South	0	0	0	0	0	0	0	0	0	0	0	0
West	207	1736	24	207	1831	32	207	2005	32	276	2005	32

97-036

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                         LEVEL OF SERVICE ANALYSIS
=========================================================================
LOCATION:        REDWOOD & STEVENS CREEK
MESSAGE:         PROJECT CONDITIONS      SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:       SATURDAY PEAK           N-S      40.00     3.00
COUNT DATE:      9/27/97                 E-W      90.00     6.50
ANAL. DATE:      7/2/97
ANAL. INIT:      RD                      CYCLE LENGTH =  139.5
GROWTH FACTOR % :    0.0                 LOST TIME    =  0.068
-----------------------------------------------------------------------
LEG  PATTERN       LANE           APPROVED     PROJECT         TOTAL
                  COUNTS           TRIPS        TRIPS          TRIPS
     LSTSRO     LT  THRU   RT    LT THRU  RT   LT THRU RT     LT  THRU   RT
 N   200010    248     0  222     0    0   0    0   0   0    248     0  222
 E   103010     59  1541  238   114   82   0   25 223   0    198  1846  238
 S   000000      0     0    0     4    0   0    0   0   0      4     0    0
 W   203000    207  1736   24     0   95   8    0 174   0    207  2005   32
=======================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
              L S T S R O                            LANE     G/C
=======================================================================
 N      2     2 0 0 0 0 0    248     3015    0.082   0.163   0.245     739
 E      1     1 0 0 0 0 0     59     1675    0.035   0.082   0.117     196
 S      0     0 0 0 0 0 0      0        0    0.000   0.000   0.000       0
 W      3     0 0 3 0 0 0   1736     5340    0.325   0.245   0.570    3044
                                         LT = 0.068
TOTALS  6                   2043             0.510                    3979
                                     1 - 0.510 = 0.490 /  6 = 0.082
                                                             V/C = 0.513
                             EXISTING           LEVEL OF SERVICE =   A
-----------------------------------------------------------------------
 N      2     2 0 0 0 0 0    248     3015    0.082   0.135   0.217     654
 E      1     1 0 0 0 0 0    173     1675    0.103   0.067   0.170     285
 S      0     0 0 0 0 0 0      0        0    0.000   0.000   0.000       0
 W      3     0 0 3 0 0 0   1831     5340    0.343   0.202   0.545    2910
                                         LT = 0.068
TOTALS  6                   2252             0.596                    3849
                                     1 - 0.596 = 0.404 /  6 = 0.067
                                                             V/C = 0.585
                         EXISTING + APPROVED    LEVEL OF SERVICE =   A
-----------------------------------------------------------------------
 N      2     2 0 0 0 0 0    248     3015    0.082   0.119   0.201     606
 E      1     1 0 0 0 0 0    198     1675    0.118   0.059   0.177     296
 S      0     0 0 0 0 0 0      0        0    0.000   0.000   0.000       0
 W      3     0 0 3 0 0 0   2005     5340    0.375   0.178   0.553    2953
                                         LT = 0.068
TOTALS  6                   2451             0.643                    3855
                                     1 - 0.643 = 0.357 /  6 = 0.059
                                                             V/C = 0.636
                 EXISTING + APPROVED + PROJECT  LEVEL OF SERVICE =   B
=======================================================================
( 2451 - 2252 )/ 2252 =   8.84 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                              LEVEL OF SERVICE ANALYSIS
=========================================================================
LOCATION:          REDWOOD & STEVENS CREEK
MESSAGE:           CUMULATIVE CONDITIONS  SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:         SATURDAY PEAK          N-S       40.00    3.00
COUNT DATE:        9/27/97                E-W       90.00    6.50
ANAL. DATE:        7/2/97
ANAL. INIT:        RD                     CYCLE LENGTH =  139.5
GROWTH FACTOR % :      0.0                LOST TIME    =  0.068
-------------------------------------------------------------------------
LEG  PATTERN      LANE          APPROVED     PROJECT          TOTAL
                  COUNTS          TRIPS        TRIPS            TRIPS
     LSTSRO    LT  THRU   RT    LT THRU  RT    LT THRU RT    LT  THRU   RT
 N   200010   248     0  222     0    0   0    56    0 69   304     0  291
 E   103010    59  1541  238   114   82   0    25  223 56   198  1846  294
 S   000000     0     0    0     0    0   0     0    0  0     0     0    0
 W   203000   207  1736   24     0   95   8    69  174  0   276  2005   32
=========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
              L S T S R O                            LANE     G/C
=========================================================================
 N      2     2 0 0 0 0 0     248     3015   0.082   0.163   0.245    739
 E      1     1 0 0 0 0 0      59     1675   0.035   0.082   0.117    196
 S      0     0 0 0 0 0 0       0        0   0.000   0.000   0.000      0
 W      3     0 0 3 0 0 0    1736     5340   0.325   0.245   0.570   3044
                                         LT = 0.068
TOTALS  6                    2043            0.510                   3979
                                    1 - 0.510 = 0.490 /  6 = 0.082
                                                            V/C = 0.513
                               EXISTING           LEVEL OF SERVICE =  A
-------------------------------------------------------------------------
 N      2     2 0 0 0 0 0     248     3015   0.082   0.135   0.217    654
 E      1     1 0 0 0 0 0     173     1675   0.103   0.067   0.170    285
 S      0     0 0 0 0 0 0       0        0   0.000   0.000   0.000      0
 W      3     0 0 3 0 0 0    1831     5340   0.343   0.202   0.545   2910
                                         LT = 0.068
TOTALS  6                    2252            0.596                   3849
                                    1 - 0.596 = 0.404 /  6 = 0.067
                                                            V/C = 0.585
                           EXISTING + APPROVED    LEVEL OF SERVICE =  A
-------------------------------------------------------------------------
 N      2     2 0 0 0 0 0     304     3015   0.101   0.113   0.214    645
 E      1     1 0 0 0 0 0     198     1675   0.118   0.056   0.174    291
 S      0     0 0 0 0 0 0       0        0   0.000   0.000   0.000      0
 W      3     0 0 3 0 0 0    2005     5340   0.375   0.169   0.544   2905
                                         LT = 0.068
TOTALS  6                    2507            0.662                   3841
                                    1 - 0.662 = 0.338 /  6 = 0.056
                                                            V/C = 0.653
                 EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =  B
=========================================================================
( 2507 - 2252 )/ 2252 =  11.32 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

12/11/97

INTERSECTION: Stevens Creek/Emporium — Alternative Access at Dudley & Redwood
PEAK HOUR: Saturday Peak Hour
COUNT DATE: 9/27/97
GROWTH
BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

	SCENARIO 6 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNTRY PROJECT TRIPS (P2)			TOTAL TRIPS (P4)		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	178	46	196	0	0	0	0	2	0	0	0	0	0	2	0
East	177	1502	99	0	86	0	0	69	0	223	0	0	223	69	0
South	48	87	223	0	0	0	0	2	0	0	0	174	0	2	174
West	374	1576	63	0	103	0	0	69	0	0	0	0	0	69	0

	E + G			SCENARIO 7 BACKGROUND E + G + A			SCENARIO 8 PROJECT E+G+A+P1			SCENARIO 9 CUMULATIVE E+G+A+P1+P2		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	178	46	196	178	46	196	178	46	196	178	48	196
East	177	1502	99	177	1588	99	400	1588	99	400	1657	99
South	48	87	223	48	87	223	48	87	397	48	89	397
West	374	1576	63	374	1679	63	374	1679	63	374	1748	63

97-036

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                         LEVEL OF SERVICE ANALYSIS
=========================================================================
LOCATION:       EMPORIUM & STEVENS CREEK
MESSAGE:        PROJECT CONDITIONS     SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:      SATURDAY PEAK          N-S      34.00    4.00
COUNT DATE:     9/27/97                E-W      88.00    3.00
ANAL. DATE:     7/2/97
ANAL. INIT:     RD                     CYCLE LENGTH =  134
GROWTH FACTOR % :     0.0              LOST TIME    =  0.090
-----------------------------------------------------------------------
LEG  PATTERN       LANE            APPROVED     PROJECT          TOTAL
                  COUNTS             TRIPS       TRIPS           TRIPS
     LSTSRO     LT  THRU   RT    LT THRU  RT    LT THRU RT     LT  THRU   RT
 N   101010    178    46  196     0    0   0     0    0  0    178    46  196
 E   203010    177  1502   99     0   86   0   223    0  0    400  1588   99
 S   101010     48    87  223     0    0   0     0    0 174    48    87  397
 W   203010    374  1576   63     0  103   0     0    0  0    374  1679   63
=======================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./   ADJ.   C. CAP.
               L S T S R O                            LANE    G/C
=======================================================================
 N      1     1 0 0 0 0 0    178     1675    0.106   0.050   0.156    261
 E      3     0 0 3 0 0 0   1502     5340    0.281   0.150   0.431   2302
 S      1     0 0 1 0 0 0     87     1780    0.049   0.050   0.099    176
 W      2     2 0 0 0 0 0    374     3015    0.124   0.100   0.224    675
                                       LT = 0.090
TOTALS  7                   2141             0.650                   3414
                                    1 - 0.650 = 0.350 /  7 = 0.050
                                                           V/C = 0.627
                                EXISTING           LEVEL OF SERVICE =  B
-----------------------------------------------------------------------
 N      1     1 0 0 0 0 0    178     1675    0.106   0.048   0.154    258
 E      3     0 0 3 0 0 0   1588     5340    0.297   0.143   0.440   2350
 S      1     0 0 1 0 0 0     87     1780    0.049   0.048   0.097    173
 W      2     2 0 0 0 0 0    374     3015    0.124   0.095   0.219    660
                                       LT = 0.090
TOTALS  7                   2227             0.666                   3441
                                    1 - 0.666 = 0.334 /  7 = 0.048
                                                           V/C = 0.647
                            EXISTING + APPROVED    LEVEL OF SERVICE =  B
-----------------------------------------------------------------------
 N      1     1 0 0 0 0 0    178     1675    0.106   0.044   0.150    251
 E      2     2 0 0 0 0 0    400     3015    0.133   0.088   0.221    666
 S      1     0 0 1 0 0 0     87     1780    0.049   0.044   0.093    166
 W      3     0 0 3 0 0 0   1679     5340    0.314   0.132   0.446   2382
                                       LT = 0.090
TOTALS  7                   2344             0.692                   3465
                                    1 - 0.692 = 0.308 /  7 = 0.044
                                                           V/C = 0.676
                 EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =  B
=======================================================================
( 2344 - 2227 )/ 2227 =    5.25 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                        LEVEL OF SERVICE ANALYSIS
==============================================================================
LOCATION:      EMPORIUM & STEVENS CREEK
MESSAGE:       CUMULATIVE CONDITIONS  SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:     SATURDAY PEAK          N-S      34.00    4.00
COUNT DATE:    9/27/97                E-W      88.00    8.00
ANAL. DATE:    7/2/97
ANAL. INIT:    RD                     CYCLE LENGTH =  134
GROWTH FACTOR % :    0.0              LOST TIME    =  0.090
----------------------------------------------------------------------------
LEG  PATTERN      LANE            APPROVED     PROJECT          TOTAL
                 COUNTS            TRIPS        TRIPS           TRIPS
     LSTSRO    LT  THRU   RT    LT THRU  RT    LT THRU RT     LT  THRU   RT
 N   101010   178    46  196     0    0   0     0    2   0   178    48  196
 E   203010   177  1502   99     0   86   0   223   69   0   400  1657   99
 S   101010    48    87  223     0    0   0     0    2 174    48    89  397
 W   203010   374  1576   63     0  103   0     0   69   0   374  1748   63
============================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
               L S T S R O                            LANE     G/C
============================================================================
 N      1     1 0 0 0 0 0     178     1675   0.106   0.050   0.156     261
 E      3     0 0 3 0 0 0    1502     5340   0.281   0.150   0.431    2302
 S      1     0 0 1 0 0 0      87     1780   0.049   0.050   0.099     176
 W      2     2 0 0 0 0 0     374     3015   0.124   0.100   0.224     675
                                          LT = 0.090
TOTALS  7                    2141            0.650                    3414
                                     1 - 0.650 = 0.350 /  7 = 0.050
                                                              V/C = 0.627
                                EXISTING          LEVEL OF SERVICE =   B
----------------------------------------------------------------------------
 N      1     1 0 0 0 0 0     178     1675   0.106   0.048   0.154     258
 E      3     0 0 3 0 0 0    1588     5340   0.297   0.143   0.440    2350
 S      1     0 0 1 0 0 0      87     1780   0.049   0.048   0.097     173
 W      2     2 0 0 0 0 0     374     3015   0.124   0.095   0.219     660
                                          LT = 0.090
TOTALS  7                    2227            0.666                    3441
                                     1 - 0.666 = 0.334 /  7 = 0.048
                                                              V/C = 0.647
                             EXISTING + APPROVED    LEVEL OF SERVICE =   B
----------------------------------------------------------------------------
 N      1     1 0 0 0 0 0     178     1675   0.106   0.042   0.148     248
 E      2     2 0 0 0 0 0     400     3015   0.133   0.084   0.217     654
 S      1     0 0 1 0 0 0      89     1780   0.050   0.042   0.092     164
 W      3     0 0 3 0 0 0    1748     5340   0.327   0.126   0.453    2419
                                          LT = 0.090
TOTALS  7                    2415            0.706                    3485
                                     1 - 0.706 = 0.294 /  7 = 0.042
                                                              V/C = 0.693
                   EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =   B
============================================================================
( 2415 - 2227 )/ 2227 =    8.44 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

E

12/11/97

INTERSECTION: Winchester/Tisch
PEAK HOUR: Saturday Peak Hour
COUNT DATE: 9/27/97
GROWTH
BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

Alternative Access at Dudley & Redwood

APPROACH	SCENARIO 6 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNTRY PROJECT TRIPS (P2)			TOTAL TRIPS (P4)		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	25	1242	366	0	16	5	0	24	22	0	31	51	0	55	73
East	108	40	26	57	0	0	0	0	0	0	33	0	0	33	0
South	283	1374	148	34	51	0	0	46	0	0	103	52	0	149	52
West	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

APPROACH	E + G			SCENARIO 7 BACKGROUND E + G + A			SCENARIO 8 PROJECT E+G+A+P2			SCENARIO 9 CUMULATIVE E+G+A+P1+P2		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	25	1242	366	25	1258	371	25	1289	422	25	1313	444
East	108	40	26	165	40	26	165	73	26	165	73	26
South	283	1374	148	317	1425	148	317	1528	200	317	1574	200
West	0	0	0	0	0	0	0	0	0	0	0	0

```
                          LEVEL OF SERVICE ANALYSIS
=======================================================================
LOCATION:      WINCHESTER & TISCH
MESSAGE:       PROJECT CONDITIONS     SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:     SATURDAY PEAK          N-S      95.00    6.50
COUNT DATE:    9/27/97                E-W      20.00    3.00
ANAL. DATE:    7/2/97
ANAL. INIT:    RD                     CYCLE LENGTH =  124.5
GROWTH FACTOR % :    0.0              LOST TIME    =  0.076
----------------------------------------------------------------------
LEG  PATTERN      LANE            APPROVED     PROJECT          TOTAL
                 COUNTS             TRIPS       TRIPS           TRIPS
     LSTSRO     LT  THRU   RT    LT THRU  RT   LT THRU RT     LT  THRU   RT
 N   102100     25  1242  366     0   16   5    0  31  51     25  1289  422
 E   100002    108    40   26    57    0   0    0  33   0    165    73   26
 S   102100    283  1374  148    34   51   0    0 103  52    317  1528  200
 W   000000      0     0    0     0    0   0    0   0   0      0     0    0
======================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./   ADJ.   C. CAP.
              L S T S R O                            LANE    V/C
======================================================================
 N      3     0 0 2 1 0 0    1608     5277   0.305  0.197  0.502    2649
 E      2     1 0 0 0 0 2     174     3116   0.056  0.131  0.187     583
 S      1     1 0 0 0 0 0     283     1675   0.169  0.066  0.235     394
 W      0     0 0 0 0 0 0       0        0   0.000  0.000  0.000       0
                                        LT = 0.076
TOTALS  6                    2065            0.606                  3626
                                       1 - 0.606 = 0.394 /  6 = 0.066
                                                            V/C = 0.569
                               EXISTING           LEVEL OF SERVICE =   A
----------------------------------------------------------------------
 N      3     0 0 2 1 0 0    1629     5277   0.309  0.176  0.485    2559
 E      2     1 0 0 0 0 2     231     3098   0.075  0.117  0.192     595
 S      1     1 0 0 0 0 0     317     1675   0.189  0.059  0.248     415
 W      0     0 0 0 0 0 0       0        0   0.000  0.000  0.000       0
                                        LT = 0.076
TOTALS  6                    2177            0.649                  3569
                                       1 - 0.649 = 0.351 /  6 = 0.059
                                                            V/C = 0.610
                          EXISTING + APPROVED     LEVEL OF SERVICE =   B
----------------------------------------------------------------------
 N      3     0 0 2 1 0 0    1711     5275   0.324  0.163  0.487    2569
 E      2     1 0 0 0 0 2     264     3136   0.084  0.109  0.193     605
 S      1     1 0 0 0 0 0     317     1675   0.189  0.054  0.243     407
 W      0     0 0 0 0 0 0       0        0   0.000  0.000  0.000       0
                                        LT = 0.076
TOTALS  6                    2292            0.673                  3581
                                       1 - 0.673 = 0.327 /  6 = 0.054
                                                            V/C = 0.640
                EXISTING + APPROVED + PROJECT     LEVEL OF SERVICE =   B
======================================================================
( 2292 - 2177 )/ 2177 =   5.28 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
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97-036

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                              LEVEL OF SERVICE ANALYSIS
=========================================================================
LOCATION:      WINCHESTER & TISCH
MESSAGE:       CUMULATIVE CONDITIONS   SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:     SATURDAY PEAK           N-S      95.00     6.50
COUNT DATE:    9/27/97                 E-W      20.00     3.00
ANAL. DATE:    7/2/97
ANAL. INIT:    RD                      CYCLE LENGTH =  124.5
GROWTH FACTOR % :    0.0               LOST TIME    =  0.076
-----------------------------------------------------------------------
LEG  PATTERN       LANE            APPROVED      PROJECT          TOTAL
                  COUNTS             TRIPS         TRIPS           TRIPS
     LSTSRO     LT  THRU   RT     LT THRU  RT    LT THRU RT     LT  THRU   RT
 N   102100     25  1242  366      0   16   5     0  55  73     25  1313  444
 E   100002    108    40   26     57    0   0     0  33   0    165    73   26
 S   102100    283  1374  148     34   51   0     0 149  52    317  1574  200
 W   000000      0     0    0      0    0   0     0   0   0      0     0    0
=======================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
              L S T S R O                             LANE     G/C
=======================================================================
 N     3     0 0 2 1 0 0    1608     5277    0.305   0.197   0.502    2649
 E     2     1 0 0 0 0 2     174     3116    0.056   0.131   0.187     583
 S     1     1 0 0 0 0 0     283     1675    0.169   0.066   0.235     394
 W     0     0 0 0 0 0 0       0        0    0.000   0.000   0.000       0
                                          LT = 0.076
TOTALS 6                    2065             0.606                    3626
                                        1 - 0.606 = 0.394 /  6 = 0.066
                                                              V/C = 0.569
                                EXISTING          LEVEL OF SERVICE =  A
-----------------------------------------------------------------------
 N     3     0 0 2 1 0 0    1629     5277    0.309   0.176   0.485    2559
 E     2     1 0 0 0 0 2     231     3098    0.075   0.117   0.192     595
 S     1     1 0 0 0 0 0     317     1675    0.189   0.059   0.248     415
 W     0     0 0 0 0 0 0       0        0    0.000   0.000   0.000       0
                                          LT = 0.076
TOTALS 6                    2177             0.649                    3569
                                        1 - 0.649 = 0.351 /  6 = 0.059
                                                              V/C = 0.610
                           EXISTING + APPROVED    LEVEL OF SERVICE =  B
-----------------------------------------------------------------------
 N     3     0 0 2 1 0 0    1757     5274    0.333   0.159   0.492    2595
 E     2     1 0 0 0 0 2     264     3136    0.084   0.106   0.190     596
 S     1     1 0 0 0 0 0     317     1675    0.189   0.053   0.242     405
 W     0     0 0 0 0 0 0       0        0    0.000   0.000   0.000       0
                                          LT = 0.076
TOTALS 6                    2338             0.682                    3596
                                        1 - 0.682 = 0.318 /  6 = 0.053
                                                              V/C = 0.650
                 EXISTING + APPROVED + PROJECT    LEVEL OF SERVICE =  B
=======================================================================
( 2338 - 2177 )/ 2177 =   7.40 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

12/11/97

INTERSECTION: Winchester/Olsen
PEAK HOUR: Saturday Peak Hour
COUNT DATE: 10/04/97
GROWTH
BACKGROUND: 0 (to August 1997 from count date @ 0.3% per month)

Alternative Access at Dudley & Redwood

	SCENARIO 6 EXISTING (E)			APPROVED TRIPS (A)			VALLEY FAIR PROJECT TRIPS (P1)			TOWN & COUNTRY PROJECT TRIPS (P2)			TOTAL TRIPS (P4)		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	78	1138	101	0	16	0	0	32	0	16	12	0	16	44	0
East	151	14	108	0	0	0	0	0	0	69	0	16	69	0	16
South	98	1208	154	0	51	0	0	32	0	0	12	91	0	44	91
West	76	23	236	0	0	0	0	0	0	0	0	0	0	0	0

	E + G			SCENARIO 7 BACKGROUND E + G + A			SCENARIO 8 PROJECT E+G+A+P2			SCENARIO 9 CUMULATIVE E+G+A+P1+P2		
APPROACH	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
North	78	1138	101	78	1154	101	94	1166	101	94	1198	101
East	151	14	108	151	14	108	220	14	124	220	14	124
South	98	1208	154	98	1259	154	98	1271	245	98	1303	245
West	76	23	236	76	23	236	76	23	236	76	23	236

97-036

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                          LEVEL OF SERVICE ANALYSIS
==========================================================================
LOCATION:      WINCHESTER & OLSEN
MESSAGE:       PROJECT CONDITIONS     SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:     SATURDAY PEAK          N-S       90.00    6.50
COUNT DATE:    10/4/97                E-W       22.00    3.00
ANAL. DATE:    7/2/97
ANAL. INIT:    RD                     CYCLE LENGTH =  121.5
GROWTH FACTOR % :    0.0              LOST TIME    =  0.078
------------------------------------------------------------------------
LEG  PATTERN      LANE             APPROVED     PROJECT          TOTAL
                 COUNTS              TRIPS        TRIPS           TRIPS
     LSTSRO    LT  THRU   RT     LT THRU  RT    LT THRU RT     LT  THRU   RT
 N   102100    78  1138  101      0   16   0    16  12   0     94  1166  101
 E   101010   151    14  108      0    0   0    69   0  16    220    14  124
 S   102100    98  1208  154      0   51   0     0  12  91     98  1271  245
 W   100100    76    23  236      0    0   0     0   0   0     76    23  236
========================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./    ADJ.   C. CAP.
              L S T S R O                            LANE     G/C
========================================================================
 N       1    1 0 0 0 0 0       78     1675   0.047   0.062   0.109     183
 E       1    1 0 0 0 0 0      151     1675   0.090   0.062   0.152     255
 S       3    0 0 2 1 0 0     1362     5299   0.257   0.187   0.444    2353
 W       1    0 0 0 1 0 0      259     1684   0.154   0.062   0.216     364
                                          LT = 0.078
TOTALS  6                     1850            0.626                    3155
                                     1 - 0.626 = 0.374 /  6 = 0.062
                                                            V/C = 0.586
                                 EXISTING          LEVEL OF SERVICE =   A
------------------------------------------------------------------------
 N       1    1 0 0 0 0 0       78     1675   0.047   0.061   0.108     181
 E       1    1 0 0 0 0 0      151     1675   0.090   0.061   0.151     253
 S       3    0 0 2 1 0 0     1413     5300   0.267   0.182   0.449    2380
 W       1    0 0 0 1 0 0      259     1684   0.154   0.061   0.215     362
                                          LT = 0.078
TOTALS  6                     1901            0.636                    3176
                                     1 - 0.636 = 0.364 /  6 = 0.061
                                                            V/C = 0.599
                            EXISTING + APPROVED    LEVEL OF SERVICE =   A
------------------------------------------------------------------------
 N       1    1 0 0 0 0 0       94     1675   0.056   0.049   0.105     176
 E       1    1 0 0 0 0 0      220     1675   0.131   0.049   0.180     301
 S       3    0 0 2 1 0 0     1516     5288   0.287   0.147   0.434    2295
 W       1    0 0 0 1 0 0      259     1684   0.154   0.049   0.203     342
                                          LT = 0.078
TOTALS  6                     2089            0.706                    3114
                                     1 - 0.706 = 0.294 /  6 = 0.049
                                                            V/C = 0.671
                 EXISTING + APPROVED + PROJECT     LEVEL OF SERVICE =   B
========================================================================
( 2089 - 1901 )/ 1901 =   9.89 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
                     LEVEL OF SERVICE ANALYSIS
=========================================================================
LOCATION:      WINCHESTER & OLSEN
MESSAGE:       CUMULATIVE CONDITIONS  SIGNAL TYPE : FULLY ACTUATED
PEAK HOUR:     SATURDAY PEAK          N-S     90.00    6.50
COUNT DATE:    10/4/97                E-W     22.00    3.00
ANAL. DATE:    7/2/97
ANAL. INIT:    RD                     CYCLE LENGTH =  121.5
GROWTH FACTOR % :    0.0              LOST TIME    =  0.078
-----------------------------------------------------------------------
LEG  PATTERN      LANE          APPROVED      PROJECT          TOTAL
                 COUNTS           TRIPS        TRIPS           TRIPS
     LSTSRO    LT  THRU   RT   LT THRU  RT   LT THRU RT    LT  THRU   RT
 N   102100    78  1138  101    0   16   0   16  44   0    94  1198  101
 E   101010   151    14  108    0    0   0   69   0  16   220    14  124
 S   102100    98  1208  154    0   51   0    0  44  91    98  1303  245
 W   100100    76    23  236    0    0   0    0   0   0    76    23  236
=======================================================================
LEG  # LANES  CRIT. MOVE   C. VOL.  T. CAP.   G/C    ADJ./   ADJ.   C. CAP.
              L S T S R O                            LANE    G/C
=======================================================================
 N      1     1 0 0 0 0 0      78     1675   0.047   0.062   0.109     183
 E      1     1 0 0 0 0 0     151     1675   0.090   0.062   0.152     255
 S      3     0 0 2 1 0 0    1362     5299   0.257   0.187   0.444    2353
 W      1     0 0 0 1 0 0     259     1684   0.154   0.062   0.216     364
                                        LT = 0.078
TOTALS  6                    1850            0.626                    3155
                                   1 - 0.626 = 0.374 /  6 = 0.062
                                                            V/C = 0.586
                             EXISTING           LEVEL OF SERVICE =   A
-----------------------------------------------------------------------
 N      1     1 0 0 0 0 0      78     1675   0.047   0.061   0.108     181
 E      1     1 0 0 0 0 0     151     1675   0.090   0.061   0.151     253
 S      3     0 0 2 1 0 0    1413     5300   0.267   0.182   0.449    2380
 W      1     0 0 0 1 0 0     259     1684   0.154   0.061   0.215     362
                                        LT = 0.078
TOTALS  6                    1901            0.636                    3176
                                   1 - 0.636 = 0.364 /  6 = 0.061
                                                            V/C = 0.599
                         EXISTING + APPROVED    LEVEL OF SERVICE =   A
-----------------------------------------------------------------------
 N      1     1 0 0 0 0 0      94     1675   0.056   0.048   0.104     174
 E      1     1 0 0 0 0 0     220     1675   0.131   0.048   0.179     300
 S      3     0 0 2 1 0 0    1548     5289   0.293   0.144   0.437    2311
 W      1     0 0 0 1 0 0     259     1684   0.154   0.048   0.202     340
                                        LT = 0.078
TOTALS  6                    2121            0.712                    3125
                                   1 - 0.712 = 0.288 /  6 = 0.048
                                                            V/C = 0.679
                EXISTING + APPROVED + PROJECT   LEVEL OF SERVICE =   B
=======================================================================
( 2121 - 1901 )/ 1901 =  11.57 PERCENT INCREASE IN CRITICAL VOLUME
5/2/88 LV -- 11/7/91 BA
```

97-036

```
TOWN & COUNTRY                                                    10/22/97
MONROE/STEVENS CREEK                                              10:06:51
SATURDAY PEAK HOUR


SIGNAL94/TEAPAC[V1 L1.4] - Capacity Analysis Summary

Intersection Averages:
    Degree of Saturation (v/c) 1.22  Vehicle Delay  73.6@ Level of Service F
      @ expect more delay due to extreme v/c's (see EVALUATE)
    ------------------------------------------------
Sq 74 |  Phase 1   |  Phase 2   |  Phase 3   |  Phase 4   |
**/** ------------------------------------------------
      | + + * ^    |            |            |      ^     |
  .   | + + * ++++ |            |            |        ++++|
 /|\  |<+ + *>     |            |            |       <++++|
  |   |   v        |            |  ^     ++++|            |
  |   |            |          ^ |++++     .  |            |
North |            |    <+ + *> |         *> |****>       |
  |   |            |     + + *  |          * |++++        |
      |            |     + + *  |          * |  v         |
    ------------------------------------------------
    | G/C= .326 | G/C= .063 | G/C= .130 | G/C= .347 |
    | G=  39.2" | G=   7.6" | G=  15.6" | G=  41.7" |
    | Y+R= 4.0" | Y+R= 4.0" | Y+R= 4.0" | Y+R= 4.0" |
    | OFF=  .0% | OFF=36.0% | OFF=45.6% | OFF=62.0% |
    ------------------------------------------------
    C=120 sec   G=104.0 sec = 86.7%  Y=16.0 sec = 13.3%  Ped=  .0 sec =   .0%

---------------------------------------------------------------------------
| Lane    |Width/|    g/C      | Service Rate| Adj  |      | HCM    | L |90% Max|
| Group   |Lanes | Reqd   Used | @C (vph) @E |Volume| v/c  | Delay  | S | Queue |
---------------------------------------------------------------------------

 N Approach                                                  77.2@  F
===========================================================================
|  RT   | 12/1 | .358 | .335 |  270 |  530 |  334 | .630 |  27.3  | D+| 375 ft|
|  TH   | 12/1 | .266 | .335 |  322 |  624 |   31 | .050 |  20.5  | C |  35 ft|
|  LT   | 12/1 | .561 | .335 |  304 |  592 |  887 |1.498 |  98.0@ |*F | 995 ft|
---------------------------------------------------------------------------

 S Approach                                                  98.6@  F
===========================================================================
|  RT   | 12/1 | .442 | .235 |    1 |  356 |  537 |1.444 | 111.0@ |*F | 693 ft|
|  TH   | 12/1 | .271 | .071 |    1 |  106 |   58 | .436 |  42.1  | E+|  91 ft|
|  LT   | 12/1 | .273 | .071 |    1 |  100 |   61 | .484 |  43.0  | E+|  96 ft|
---------------------------------------------------------------------------

 E Approach                                                  62.5@  F
===========================================================================
|  RT   | 12/1 | .708 | .715 | 1087 | 1132 | 1073 | .948 |  23.1  | C | 515 ft|
|  TH   | 36/3 | .463 | .355 | 1268 | 1986 | 2280 |1.148 |  84.3@ | F | 826 ft|
|  LT   | 24/2 | .297 | .139 |    1 |  467 |  344 | .702 |  40.6  | E+| 250 ft|
---------------------------------------------------------------------------

 W Approach                                                  79.9@  F
===========================================================================
|  RT   | 12/1 | .269 | .355 |  328 |  563 |   42 | .075 |  19.5  | C+|  46 ft|
|  TH   | 36/3 | .558 | .355 | 1268 | 1986 | 2974 |1.497 |  84.3@ |*F |1078 ft|
|  LT   | 24/2 | .286 | .139 |    1 |  467 |  249 | .508 |  37.1  | D | 181 ft|
---------------------------------------------------------------------------
```

```
TOWN & COUNTRY                                                    10/22/97
MONROE/STEVENS CREEK                                              13:09:49
SATURDAY PEAK HOUR REDWOOD ACCESS


SIGNAL94/TEAPAC[V1 L1.4] - Capacity Analysis Summary

Intersection Averages:
     Degree of Saturation (v/c) 1.24  Vehicle Delay  75.2@ Level of Service F
       @ expect more delay due to extreme v/c's (see EVALUATE)
     --------------------------------------------
Sq 74 |  Phase 1   |  Phase 2   |  Phase 3   |  Phase 4  :
**/** --------------------------------------------
      | + + * ^    |            |            |       ^   |
  .   | + + * ++++|            |            |      ++++|
 /|\  |<+ + *>     |            |            |     <++++|
  |   |   v        |            |  ^    ++++|           |
  |   |            |         `  |++++   v   |           |
North |            |    <- - *>|         *>|****>      '
  |   |            |     - - * |         * |++++       |
      |            |     - - * |         * |   v       |
     --------------------------------------------
      | G/C= .316 | G/C= .056 | G/C= .173 | G/C= .322 .
      | G=  37.9" | G=   6.7" | G=  20.8" | G=  38.7" |
      | Y+R= 4.0" | Y+R= 4.0" | Y+R= 4.0" | Y+R= 4.0" |
      | OFF=  .0% | OFF=34.9% | OFF=43.8% | OFF=64.4% |
     --------------------------------------------
     C=120 sec   G=104.0 sec = 86.7%  Y=16.0 sec = 13.3%  Ped=  .0 sec =   .0%

-----------------------------------------------------------------------
| Lane   |Width/|     g/C     | Service Rate|  Adj |       |  HCM   L |90% Max|
|  Group | Lanes| Reqd   Used | @C (vph) @E |Volume|  v/c  | Delay  S | Queue |
-----------------------------------------------------------------------

 N Approach                                                78.3@  F
=======================================================================
|  RT    | 12/1 | .358 | .324 |   237 |  511 |  334 | .651 |  28.5  D+| 381 ft|
|  TH    | 12/1 | .266 | .324 |   282 |  603 |   31 | .051 |  21.2  C |  35 ft|
|  LT    | 12/1 | .561 | .324 |   267 |  573 |  887 |1.548 |  99.0@|*F |1012 ft|
-----------------------------------------------------------------------

 S Approach                                                96.9@  F
=======================================================================
|  RT    | 12/1 | .490 | .270 |    46 |  417 |  641 |1.498 | 106.6@|*F | 789 ft|
|  TH    | 12/1 | .271 | .064 |     1 |   93 |   58 | .487 |  43.7 | E+|  92 ft|
|  LT    | 12/1 | .273 | .064 |     1 |   88 |   61 | .540 |  45.2 | E+|  96 ft|
-----------------------------------------------------------------------

 E Approach                                                64.8@  F
=======================================================================
|  RT    | 12/1 | .708 | .680 |  1019 | 1076 | 1073 | .997 |  35.0 , D | 580 ft|
|  TH    | 36/3 | .443 | .331 |   979 | 1848 | 2114 |1.144 |  85.9@| F | 795 ft|
|  LT    | 24/2 | .317 | .181 |     1 |  630 |  501 | .780 |  39.9 | D | 346 ft|
-----------------------------------------------------------------------

 W Approach                                                80.9@  F
=======================================================================
|  RT    | 12/1 | .269 | .331 |   258 |  523 |   42 | .080 |  21.0 | C |  47 ft|
|  TH    | 36/3 | .541 | .331 |   979 | 1848 | 2860 |1.548 |  85.9@|*F |1076 ft|
|  LT    | 24/2 | .286 | .181 |     1 |  630 |  249 | .388 |  33.1  D |  172 ft|
-----------------------------------------------------------------------
```

97-036

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TOWN & COUNTRY                                                    10/22/97
MONROE.STEVENS CREEK                                              [illegible]
SATURDAY PEAK HOUR DUDLEY ACCESS


SIGNAL94/TEAPAC[V1 L1.4] - Capacity Analysis Summary

Intersection Averages:
    Degree of Saturation (v/c) 1.24  Vehicle Delay  74.6@ Level of Service F
      @ expect more delay due to extreme v/c's (see EVALUATE)
     -------------------------------------------------
Sq 74 |  Phase 1  |  Phase 2  |  Phase 3  |  Phase 4  |
**/** -------------------------------------------------
      | + + * ^   |           |           |       ^   |
  .   | + + * ++++|           |           |       ++++|
 /|\  |<+ + *>    |           |           |      <++++|
  |   |   v       |           |   .   ----|           |
  |   |           |       ^   |++++    .  |           |
North |           |    <+ + *>|         *>|****>      |
  |   |           |     + + * |         * |++++       |
      |           |     + + * |         * |   v       |
     -------------------------------------------------
      | G/C= .320 | G/C= .059 | G/C= .157 | G/C= .331 |
      | G=  38.3" | G=   7.0" | G=  18.8" | G=  39.8" |
      | Y+R= 4.0" | Y+R= 4.0" | Y+R= 4.0" | Y+R= 4.0" |
      | OFF=  .0% | OFF=35.3% | OFF=44.5% | OFF=63.5% |
     -------------------------------------------------
     C=120 sec   G=104.0 sec = 86.7%  Y=16.0 sec = 13.3%  Ped=  .0 sec =   .0%

-----------------------------------------------------------------------------
| Lane   |Width/|     g/C     | Service Rate| Adj |       |  HCM  | L |90% Max|
|  Group | Lanes| Reqd   Used | @C (vpn) @E |Volume|  v/c | Delay | S | Queue |
-----------------------------------------------------------------------------

 N Approach                                                  77.9@  F
=============================================================================
|   RT   | 12/1 | .358 | .328 |  249 |  517 |  334 | .644 |  28.0 | D+| 379 ft|
|   TH   | 12/1 | .266 | .328 |  297 |  611 |   31 | .051 |  20.9 | C |  35 ft|
|   LT   | 12/1 | .561 | .328 |  281 |  580 |  887 |1.529 |  98.7@|*F |1006 ft|
-----------------------------------------------------------------------------

 S Approach                                                  97.4@  F
=============================================================================
|   RT   | 12/1 | .472 | .257 |    1 |  395 |  602 |1.475 | 108.1@|*F | 754 ft|
|   TH   | 12/1 | .271 | .067 |    1 |   99 |   58 | .464 |  42.9 | E+|  91 ft|
|   LT   | 12/1 | .273 | .067 |    1 |   93 |   61 | .513 |  44.1 | E+|  96 ft|
-----------------------------------------------------------------------------

 E Approach                                                  63.8@  F
=============================================================================
|   RT   | 12/1 | .708 | .693 | 1044 | 1097 | 1073 | .978 |  29.8 | D+| 556 ft|
|   TH   | 36/3 | .451 | .340 | 1087 | 1898 | 2180 |1.149 |  85.3@| F | 809 ft|
|   LT   | 24/2 | .309 | .165 |    1 |  568 |  437 | .747 |  39.9 | D | 308 ft|
-----------------------------------------------------------------------------

 W Approach                                                  80.5@  F
=============================================================================
|   RT   | 12/1 | .269 | .340 |  284 |  538 |   42 | .078 |  20.4 | C |  47 ft|
|   TH   | 36/3 | .547 | .340 | 1087 | 1898 | 2902 |1.529 |  85.3@|*F |1077 ft|
|   LT   | 24/2 | .286 | .165 |    1 |  568 |  249 | .426 |  34.5 | D | 175 ft|
-----------------------------------------------------------------------------
```

97-036

```
TOWN & COUNTRY                                                    10/22/97
MONROE/STEVENS CREEK                                              13:15:30
SATURDAY PEAK HOUR REDWOO & DUDLEY ACCESS


SIGNAL94/TEAPAC[V1 L1.4] - Capacity Analysis Summary

Intersection Averages:
    Degree of Saturation (v/c) 1.24  Vehicle Delay  75.2@ Level of Service F
       @ expect more delay due to extreme v/c's (see EVALUATE)
      ------------------------------------------------
Sq 74 |  Phase 1  |  Phase 2  |  Phase 3  |  Phase 4  |
**/** ------------------------------------------------
      | + + * ^   |           |           |       ^   |
  .   | + + * ++++|           |           |       ++++|
 /|\  |<+ + *>    |           |           |     <++++|
  |   |   v       |           |  ^    ++++|           |
  |   |           |        ^  |++++   v   |           |
North |           |    <+ + *>|        *>|****>      .
  |   |           |     - - * |         * |++++       
      |           |     - + * |         * |   v       
      ------------------------------------------------
      | G/C= .316 | G/C= .056 | G/C= .173 | G/C= .322 |
      | G=  37.9" | G=   6.7" | G=  20.8" | G=  38.7" |
      | Y+R= 4.0" | Y+R= 4.0" | Y+R= 4.0" | Y+R= 4.0" |
      | OFF=  .0% | OFF=34.9% | OFF=43.8% | OFF=64.4% |
      ------------------------------------------------
      C=120 sec   G=104.0 sec = 86.7%  Y=16.0 sec = 13.3%  Ped=  .0 sec =   .0%

-----------------------------------------------------------------------------
| Lane   |Width/|     g/C     | Service Rate| Adj |       | HCM  | L |90% Max|
|  Group | Lanes| Reqd   Used | @C (vph) @E |Volume|  v/c | Delay | S | Queue |
-----------------------------------------------------------------------------

 N Approach                                                 78.3@  F
=============================================================================
|  RT    | 12/1 | .358 | .324 |  237 |  511 |  334 | .651 |  28.5 | D+| 381 ft|
|  TH    | 12/1 | .266 | .324 |  282 |  603 |   31 | .051 |  21.2 | C |  35 ft|
|  LT    | 12/1 | .561 | .324 |  267 |  573 |  887 |1.548 |  99.0@|*F |1012 ft|
-----------------------------------------------------------------------------

 S Approach                                                 96.9@  F
=============================================================================
|  RT    | 12/1 | .490 | .270 |   46 |  417 |  641 |1.498 | 106.6@|*F | 789 ft|
|  TH    | 12/1 | .271 | .064 |    1 |   93 |   58 | .487 |  43.7 | E+|  92 ft|
|  LT    | 12/1 | .273 | .064 |    1 |   88 |   61 | .540 |  45.2 | E+|  96 ft|
-----------------------------------------------------------------------------

 E Approach                                                 64.8@  F
=============================================================================
|  RT    | 12/1 | .708 | .680 | 1019 | 1076 | 1073 | .997 |  35.0 | D | 580 ft|
|  TH    | 36/3 | .443 | .331 |  979 | 1848 | 2114 |1.144 |  85.9@| F | 795 ft|
|  LT    | 24/2 | .317 | .181 |    1 |  630 |  501 | .780 |  39.9 | D | 346 ft|
-----------------------------------------------------------------------------

 W Approach                                                 80.9@  F
=============================================================================
|  RT    | 12/1 | .269 | .331 |  258 |  523 |   42 | .080 |  21.0 | C |  47 ft|
|  TH    | 36/3 | .541 | .331 |  979 | 1848 | 2860 |1.548 |  85.9@|*F |1076 ft|
|  LT    | 24/2 | .286 | .181 |    1 |  630 |  249 | .388 |  33.1 | D | 172 ft|
-----------------------------------------------------------------------------
```

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TOWN & COUNTRY                                                  10/22/97
STEVENS CREEK/REDWOOD                                           13:18:41
SATURDAY PEAK HOUR


SIGNAL94/TEAPAC[V1 L1.4] - Capacity Analysis Summary

Intersection Averages:
     Degree of Saturation (v/c)  .81  Vehicle Delay  19.7  Level of Service C+

       ------------------------------------
Sq 14 |  Phase 1   |  Phase 2   |  Phase 3  |
**/** ------------------------------------
      | +    * ^   | +          |        ^  |
  .   | +    * ++++| +          |       ++++|
 /|\  |<+    *>    |<+          |      <++++|
  |   |            |    ^   ++++|           |
  |   |            |****    v   |           |
North |            |            |****>      |
  |   |            |            |****       |
      |            |            |   v       |
       ------------------------------------
      | G/C= .189 | G/C= .183 | G/C= .495 |
      | G=  17.0" | G=  16.5" | G=  44.6" |
      | Y+R= 4.0" | Y+R= 4.0" | Y+R= 4.0" |
      | OFF=  .0% | OFF=23.3% | OFF=46.0% |
       ------------------------------------
      C= 90 sec   G= 78.0 sec = 86.7%  Y=12.0 sec = 13.3%  Ped=  .0 sec =   .0%

--------------------------------------------------------------------------------
| Lane    |Width/|     g/C      | Service Rate|  Adj  |      |  HCM  | L |90% Max|
|  Group  | Lanes| Reqd   Used  | @C (vph) @E |Volume|  v/c | Delay | S | Queue |
--------------------------------------------------------------------------------

 N Approach                                                      19.8   C+
================================================================================
|   RT    | 12/1 | .290 | .427 |  578 |  676 |  323 | .478 |  14.5 | B | 234 ft|
|   LT    | 24/2 | .196 | .200 |  367 |  707 |  348 | .492 |  24.7 |*C | 176 ft|
--------------------------------------------------------------------------------

 E Approach                                                      16.7   C+
================================================================================
|   RT    | 12/1 | .292 | .739 | 1150 | 1171 |  327 | .279 |   3.0 | A | 108 ft|
|   TH    | 36/3 | .468 | .506 | 2755 | 2830 | 2508 | .886 |  17.9 | C+| 522 ft|
|   LT    | 24/2 | .174 | .194 |  335 |  686 |  218 | .318 |  23.8 | C | 111 ft|
--------------------------------------------------------------------------------

 W Approach                                                      22.8   C
================================================================================
|   TH+RT| 36/3 | .498 | .506 | 2747 | 2822 | 2692 | .954 |  22.5 |*C | 560 ft|
|   LT    | 24/2 | .191 | .194 |  335 |  686 |  316 | .461 |  24.8 |*C | 161 ft|
--------------------------------------------------------------------------------


TOWN & COUNTRY                                                  10/22/97
STEVENS CREEK/REDWOOD                                           13:18:56
SATURDAY PEAK HOUR

SIGNAL94/TEAPAC[V1 L1.4] - Data and File Management
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97-036

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TOWN & COUNTRY                                                   10/22/97
STEVENS CREEK/REDWOOD                                            13:22:[illegible]
SATURDAY PEAK HOUR REDWOOD ACCESS


SIGNAL94/TEAPAC[V1 L1.4] - Capacity Analysis Summary

Intersection Averages:
     Degree of Saturation (v/c)  .77  Vehicle Delay  19.3  Level of Service C+

      ----------------------------------
Sq 14 |  Phase 1  |  Phase 2  |  Phase 3  |
**/** ----------------------------------
      | +    * ^  | +         |        ^  |
  .   | +    * ++++| +         |      ++++|
 /|\  |<+    *>   |<+         |     <++++|
  |   |           |    ^   ++++|          |
  |   |           |****    v  |          |
North |           |           |****>     |
  |   |           |           |****      |
      |           |           |   v      |
      ----------------------------------
      | G/C= .193 | G/C= .188 | G/C= .486 |
      | G=  17.4" | G=  16.9" | G=  43.7" |
      | Y+R= 4.0" | Y+R= 4.0" | Y+R= 4.0" |
      | OFF=  .0% | OFF=23.8% | OFF=47.0% |
      ----------------------------------
      C= 90 sec   G= 78.0 sec = 86.7%  Y=12.0 sec = 13.3%  Ped=  .0 sec =   .0%

------------------------------------------------------------------------------
| Lane   |Width/|     g/C     | Service Rate|  Adj  |      |  HCM  | L |90% Max|
|  Group | Lanes| Reqd   Used | @C (vph) @E |Volume|  v/c | Delay | S | Queue |
------------------------------------------------------------------------------

 N Approach                                                  19.4   C+
==============================================================================
|   RT   | 12/1 | .290 | .436 |  596 |  691 |  323 | .467 |  14.0 | B | 230 ft|
|   LT   | 24/2 | .196 | .205 |  393 |  724 |  348 | .481 |  24.4 |*C | 175 ft|
------------------------------------------------------------------------------

 E Approach                                                  15.5   C+
==============================================================================
|   RT   | 12/1 | .292 | .735 | 1141 | 1163 |  327 | .281 |   3.1 | A | 110 ft|
|   TH   | 36/3 | .436 | .497 | 2695 | 2777 | 2308 | .831 |  16.4 | C+| 490 ft|
|   LT   | 24/2 | .179 | .199 |  362 |  703 |  250 | .356 |  23.8 | C | 127 ft|
------------------------------------------------------------------------------

 W Approach                                                  20.8   C
==============================================================================
|  TH+RT| 36/3 | .477 | .497 | 2686 | 2768 | 2558 | .924 |  20.4 |*C | 543 ft|
|   LT   | 24/2 | .191 | .199 |  362 |  703 |  316 | .450 |  24.4 |*C | 160 ft|
------------------------------------------------------------------------------


TOWN & COUNTRY                                                   10/22/97
STEVENS CREEK/REDWOOD                                            13:22:29
SATURDAY PEAK HOUR REDWOOD ACCESS


SIGNAL94/TEAPAC[V1 L1.4] - Data and File Management
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97-036

E.

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TOWN & COUNTRY                                                10/22/97
STEVENS CREEK/REDWOOD                                         13:24:35
SATURDAY PEAK HOUR DUDLEY ACCESS


SIGNAL94/TEAPAC[V1 L1.4] - Capacity Analysis Summary

Intersection Averages:
     Degree of Saturation (v/c)  .79  Vehicle Delay  13.9  Level of Service C+

       ---------------------------------
Sq 14 |  Phase 1  |  Phase 2  |  Phase 3  |
**/** ---------------------------------
      | +    * ^  | +         |       ^   |
  .   | +    * ++++| +        |       ++++|
 /|\  |<+    *>   |<+         |      <++++|
  |   |           |   `   ++++|           |
  |   |           |****   v   |           |
North |           |           |****>      |
  |   |           |           |****       |
      |           |           |  v        |
       ---------------------------------
      | G/C= .191 | G/C= .185 | G/C= .490 |
      | G=  17.2" | G=  16.7" | G=  44.1" |
      | Y+R= 4.0" | Y+R= 4.0" | Y+R= 4.0" |
      | OFF=  .0% | OFF=23.6% | OFF=46.5% |
       ---------------------------------
      C= 90 sec   G= 78.0 sec = 86.7%  Y=12.0 sec = 13.3%  Ped=  .0 sec =   .0%

-----------------------------------------------------------------------------
| Lane   |Width/|     g/C      | Service Rate| Adj |       |  HCM  | L |90% Max|
|  Group | Lanes| Reqd   Used  | @C (vpn) @E |Volume|  v/c | Delay | S | Queue |
-----------------------------------------------------------------------------

 N Approach                                                  19.6   C+
=============================================================================
|   RT    | 12/1 | .290 | .432 |  587 |  684 |  323 | .472 |  14.3 | B | 232 ft|
|   LT    | 24/2 | .196 | .202 |  381 |  716 |  348 | .486 |  24.6 |*C | 176 ft|
-----------------------------------------------------------------------------

 E Approach                                                  16.0   C+
=============================================================================
|   RT    | 12/1 | .292 | .737 | 1146 | 1167 |  327 | .280 |   3.0 | A | 109 ft|
|   TH    | 36/3 | .452 | .501 | 2724 | 2802 | 2408 | .859 |  17.0 | C+| 506 ft|
|   LT    | 24/2 | .174 | .196 |  349 |  695 |  218 | .314 |  23.6 | C | 111 ft|
-----------------------------------------------------------------------------

 W Approach                                                  21.6   C
=============================================================================
|  TH+RT| 36/3 | .487 | .501 | 2715 | 2793 | 2620 | .938 |  21.2 |*C | 551 ft|
|   LT    | 24/2 | .191 | .196 |  349 |  695 |  316 | .455 |  24.6 |*C | 161 ft|
-----------------------------------------------------------------------------


TOWN & COUNTRY                                                10/22/97
STEVENS CREEK/REDWOOD                                         13:24:48
SATURDAY PEAK HOUR DUDLEY ACCESS


SIGNAL94/TEAPAC[V1 L1.4] - Data and File Management
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97-036

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TOWN & COUNTRY                                                    10/22/97
STEVENS CREEK/REDWOOD                                             13:26:57
SATURDAY PEAK HOUR REDWOOD & DUDLEY ACCESS


SIGNAL94/TEAPAC[V1 L1.4] - Capacity Analysis Summary

Intersection Averages:
     Degree of Saturation (v/c)  .77  Vehicle Delay  18.3  Level of Service C+

      ------------------------------------
Sq 14 |  Phase 1   |  Phase 2   |  Phase 3   |
**/** ------------------------------------
      | +    * ^   | +          |         ^  |
  .   | +    * ++++| +          |       ++++|
 /|\  |<+    *>    |<+          |      <++++|
  |   |            |    ^   ++++|            |
  |   |            |****    .   |            |
North |            |            |****>       |
  |   |            |            |****        |
      |            |            |  v         |
      ------------------------------------
      | G/C= .193 | G/C= .188 | G/C= .486 |
      | G=  17.4" | G=  16.9" | G=  43.7" |
      | Y+R= 4.0" | Y+R= 4.0" | Y+R= 4.0" |
      | OFF=  .0% | OFF=23.8% | OFF=47.0% |
      ------------------------------------
      C= 90 sec   G= 78.0 sec = 86.7%  Y=12.0 sec = 13.3%  Ped=  .0 sec =   .0%

----------------------------------------------------------------------------
| Lane   |Width/|      g/C      | Service Rate|  Adj  |       |  HCM  | L |90% Max|
|  Group | Lanes| Reqd   Used   | @C (vph) @E |Volume|  v/c  | Delay | S | Queue |
----------------------------------------------------------------------------

 N Approach                                                 19.4   C+
============================================================================
|   RT   | 12/1 | .290 | .436 |  596 |  691 |  323 | .467 |  14.0 | B | 230 ft|
|   LT   | 24/2 | .196 | .205 |  393 |  724 |  348 | .481 |  24.4 |*C | 175 ft|
----------------------------------------------------------------------------

 E Approach                                                 15.5   C+
============================================================================
|   RT   | 12/1 | .292 | .735 | 1141 | 1163 |  327 | .281 |   3.1 | A | 110 ft|
|   TH   | 36/3 | .436 | .497 | 2695 | 2777 | 2308 | .831 |  16.4 | C+| 490 ft|
|   LT   | 24/2 | .179 | .199 |  362 |  703 |  250 | .356 |  23.8 | C | 127 ft|
----------------------------------------------------------------------------

 W Approach                                                 20.8   C
============================================================================
|   TH+RT| 36/3 | .477 | .497 | 2686 | 2768 | 2558 | .924 |  20.4 |*C | 543 ft|
|   LT   | 24/2 | .191 | .199 |  362 |  703 |  316 | .450 |  24.4 |*C | 160 ft|
----------------------------------------------------------------------------


TOWN & COUNTRY                                                    10/22/97
STEVENS CREEK/REDWOOD                                             13:27:02
SATURDAY PEAK HOUR REDWOOD & DUDLEY ACCESS


SIGNAL94/TEAPAC[V1 L1.4] - Data and File Management
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TOWN & COUNTRY                                                 11/22/97
STEVENS CREEK/EMPORIUM                                         [illegible]
SATURDAY PEAK HOUR


SIGNAL94/TEAPAC[V1 L1.4] - Capacity Analysis Summary

Intersection Averages:
     Degree of Saturation (v/c)  .74  Vehicle Delay  19.3  Level of Service C+

        ------------------------------------------------
Sq 15 |  Phase 1  |  Phase 2  |  Phase 3  |  Phase 4  |
**/** ------------------------------------------------
      | + + *     | +         |         ^ |         ^ |
  .   | + + *     | +         |      ++++ |      ++++ |
 /|\  |<+ + *>    |<+         |     <++++ |     <++++ |
  |   |   v       |   ^   ++++|      **** |           |
  |   |       ^   |****   v   |      v    |           |
North |   <+ + +> |         +>|        -> |****>      |
  |   |     + + + |         + |         - |++++       |
      |     + + + |         + |         - |  v        |
        ------------------------------------------------
      | G/C= .213 | G/C= .149 | G/C= .026 | G/C= .433 |
      | G=  19.2" | G=  13.4" | G=   2.4" | G=  39.0" |
      | Y+R= 4.0" | Y+R= 4.0" | Y+R= 4.0" | Y+R= 4.0" |
      | OFF=  .0% | OFF=25.8% | OFF=45.2% | OFF=52.2% |
        ------------------------------------------------
     C= 90 sec   G= 74.0 sec = 82.2%  Y=16.0 sec = 17.8%  Ped=  .0 sec =   .0%

-----------------------------------------------------------------------------
| Lane    |Width/|     g/C     | Service Rate| Adj  |      | HCM  | L |90% Max|
|  Group  | Lanes| Reqd   Used | @C (vph) @E |Volume| v/c  | Delay| S | Queue |
-----------------------------------------------------------------------------

 N Approach                                                  21.3    C
=============================================================================
|   RT    | 12/1 | .235 | .418 |  562 |  662 |  218 | .329 |  13.5 | B | 160 ft|
|   TH    | 12/1 | .158 | .224 |  239 |  418 |   53 | .127 |  21.2 | C |  52 ft|
|   LT    | 12/1 | .257 | .224 |  150 |  271 |  198 | .710 |  30.0 |*D+| 194 ft|
-----------------------------------------------------------------------------

 S Approach                                                  18.0    C+
=============================================================================
|   RT    | 12/1 | .430 | .489 |  692 |  774 |  584 | .755 |  17.1 | C+| 378 ft|
|   TH    | 12/1 | .171 | .224 |  239 |  418 |   99 | .237 |  21.8 | C |  97 ft|
|   LT    | 12/1 | .162 | .224 |  186 |  330 |   53 | .158 |  21.3 | C |  52 ft|
-----------------------------------------------------------------------------

 E Approach                                                  17.0    C+
=============================================================================
|   RT    | 12/1 | .182 | .515 |  741 |  816 |  110 | .135 |   8.6 | B+|  67 ft|
|   TH    | 36/3 | .399 | .515 | 2811 | 2879 | 2066 | .718 |  13.4 | B | 422 ft|
|   LT    | 24/2 | .262 | .231 |  528 |  818 |  671 | .820 |  29.6 |*D+| 326 ft|
-----------------------------------------------------------------------------

 W Approach                                                  21.7    C
=============================================================================
|   RT    | 12/1 | .166 | .444 |  611 |  704 |   70 | .099 |  11.0 | B |  49 ft|
|   TH    | 36/3 | .417 | .444 | 2361 | 2484 | 2182 | .878 |  20.2 |*C | 511 ft|
|   LT    | 24/2 | .211 | .160 |  123 |  568 |  428 | .754 |  31.3 |*D+| 227 ft|
-----------------------------------------------------------------------------
```

97-036

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TOWN & COUNTRY                                                  10/22/97
STEVENS CREEK/EMPORIUM                                          [illegible]:32:[illegible]
SATURDAY PEAK HOUR REDWOOD ACCESS


SIGNAL94/TEAPAC[V1 L1.4] - Capacity Analysis Summary

Intersection Averages:
     Degree of Saturation (v/c)  .76  Vehicle Delay  21.6   Level of Service C

      --------------------------------------------
Sq 15 |  Phase 1  |  Phase 2  |  Phase 3  |  Phase 4  |
**/** --------------------------------------------
      | + + *     | +         |        ^  |        ^  |
  .   | + + *     | +         |     ++++|      ++++|
 /|\  |<+ + *>    |<+         |    <++++|     <++++|
  |   |   v       |    ^  ****|     ++++|          |
  |   |        ^  |++++   v   |     v     |          |
North |    <+ + +>|         +>|       +>|****>     |
  |   |      + + +|          +|        +|++++      |
      |      + + +|          +|        +|  v       |
      --------------------------------------------
      | G/C= .246 | G/C= .213 | G/C= .000 | G/C= .408 |
      | G=  22.1" | G=  19.1" | G=     .0"| G=  36.8" |
      | Y+R= 4.0" | Y+R= 4.0" | Y+R=   .0"| Y+R= 4.0" |
      | OFF=  .0% | OFF=29.0% | OFF=54.7% | OFF=54.7% |
      --------------------------------------------
      C= 90 sec   G= 78.0 sec = 86.7%  Y=12.0 sec = 13.3%  Ped=  .0 sec =   .0%

-------------------------------------------------------------------------------
| Lane   |Width/|    g/C     | Service Rate| Adj  |      | HCM  | L |90% Max|
| Group  | Lanes| Reqd  Used | @C (vph) @E |Volume|  v/c | Delay| S | Queue |
-------------------------------------------------------------------------------

 N Approach                                                 17.0   C+
===============================================================================
|  RT    | 12/1 | .235 | .514 |  738 |  814 |  218 | .268 |   9.4 | B+| 134 ft|
|  TH    | 12/1 | .158 | .257 |  314 |  478 |   53 | .111 |  19.4 | C+|  50 ft|
|  LT    | 12/1 | .255 | .257 |  201 |  320 |  198 | .611 |  24.8 |*C | 186 ft|
-------------------------------------------------------------------------------

 S Approach                                                 14.0   B
===============================================================================
|  RT    | 12/1 | .363 | .514 |  738 |  814 |  460 | .565 |  12.1 | B | 283 ft|
|  TH    | 12/1 | .171 | .257 |  314 |  478 |   99 | .207 |  20.0 | C+|  93 ft|
|  LT    | 12/1 | .162 | .257 |  244 |  382 |   53 | .138 |  19.6 | C+|  50 ft|
-------------------------------------------------------------------------------

 E Approach                                                 21.7   C
===============================================================================
|  RT    | 12/1 | .182 | .420 |  564 |  664 |  110 | .166 |  12.4 | B |  81 ft|
|  TH    | 36/3 | .399 | .420 | 2200 | 2344 | 2066 | .881 |  21.4 | C | 506 ft|
|  LT    | 24/2 | .222 | .224 |  491 |  792 |  483 | .610 |  24.9 |*C | 237 ft|
-------------------------------------------------------------------------------

 W Approach                                                 24.0   C
===============================================================================
|  RT    | 12/1 | .166 | .420 |  564 |  664 |   70 | .105 |  12.1 | B |  51 ft|
|  TH    | 36/3 | .417 | .420 | 2200 | 2344 | 2182 | .931 |  24.4 |*C | 534 ft|
|  LT    | 24/2 | .211 | .224 |  491 |  792 |  428 | .540 |  24.0 | C | 210 ft|
-------------------------------------------------------------------------------
```

97-036

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TOWN & COUNTRY                                                       10/22/97
STEVENS CREEK/EMPORIUM                                                0:33:10
SATURDAY PEAK HOUR DUDLEY ACCESS


SIGNAL94/TEAPAC[V1 L1.4] - Capacity Analysis Summary

Intersection Averages:
     Degree of Saturation (v/c)  .74  Vehicle Delay  19.3  Level of Service C+

      ------------------------------------
Sq 14 |  Phase 1  |  Phase 2  |  Phase 3  |
**/** ------------------------------------
      | + + *     | +         |      ^    |
  .   | + + *     | +         |       ++++|
 /|\  |<+ + *>    |<+         |      <++++|
  |   |   v       |   ^   ****|           |
  |   |       ^   |++++   v   |           |
North |    <+ + +>|         +>|****>      |
  |   |     + + + |         + |++++       |
      |     + + + |         + |  v        |
      ------------------------------------
      | G/C= .219 | G/C= .202 | G/C= .446 |
      | G=  19.7" | G=  18.2" | G=  40.1" |
      | Y+R= 4.0" | Y+R= 4.0" | Y+R= 4.0" |
      | OFF=  .0% | OFF=26.3% | OFF=51.0% |
      ------------------------------------
     C= 90 sec   G= 78.0 sec = 86.7%  Y=12.0 sec = 13.3%  Ped=  .0 sec =   .0%

-----------------------------------------------------------------------------
| Lane   |Width/|     g/C     | Service Rate|  Adj  |      |  HCM  | L |90% Max|
|  Group | Lanes| Reqd   Used | @C (vph) @E |Volume|  v/c | Delay | S | Queue |
-----------------------------------------------------------------------------

 N Approach                                                 19.6   C+
=============================================================================
|   RT   | 12/1 | .235 | .476 |  669 |  754 |  218 | .289 |  10.9 | B | 144 ft|
|   TH   | 12/1 | .158 | .230 |  252 |  428 |   53 | .124 |  20.9 | C |  52 ft|
|   LT   | 12/1 | .257 | .230 |  159 |  279 |  198 | .692 |  28.9 |*D+| 193 ft|
-----------------------------------------------------------------------------

 S Approach                                                 17.0   C+
=============================================================================
|   RT   | 12/1 | .394 | .476 |  669 |  754 |  518 | .687 |  15.8 | C+| 343 ft|
|   TH   | 12/1 | .171 | .230 |  252 |  428 |   99 | .231 |  21.5 | C |  96 ft|
|   LT   | 12/1 | .162 | .230 |  196 |  339 |   53 | .155 |  21.0 | C |  52 ft|
-----------------------------------------------------------------------------

 E Approach                                                 19.5   C+
=============================================================================
|   RT   | 12/1 | .182 | .457 |  634 |  724 |  110 | .152 |  10.8 | B |  76 ft|
|   TH   | 36/3 | .399 | .457 | 2442 | 2554 | 2066 | .809 |  17.5 | C+| 473 ft|
|   LT   | 24/2 | .241 | .213 |  438 |  754 |  577 | .765 |  28.6 |*D+| 287 ft|
-----------------------------------------------------------------------------

 W Approach                                                 19.5   C+
=============================================================================
|   RT   | 12/1 | .166 | .457 |  634 |  724 |   70 | .097 |  10.6 | B |  48 ft|
|   TH   | 36/3 | .417 | .457 | 2442 | 2554 | 2182 | .854 |  18.7 |*C+| 500 ft|
|   LT   | 24/2 | .211 | .213 |  438 |  754 |  428 | .568 |  24.9 | C | 213 ft|
-----------------------------------------------------------------------------
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97-036

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TOWN & COUNTRY                                                    11/22/97
STEVENS CREEK/EMPORIUM                                            12:54:18
SATURDAY PEAK HOUR REDWOOD & DUDLEY ACCESS


SIGNAL94/TEAPAC[V1 L1.4] - Capacity Analysis Summary

Intersection Averages:
     Degree of Saturation (v/c)  .76  Vehicle Delay  21.6   Level of Service C

       --------------------------------------------------
Sq 15 |  Phase 1   |  Phase 2   |  Phase 3   |  Phase 4   |
**/** --------------------------------------------------
      | + + *      | +          |         ^  |        ^   |
  .   | + + *      | +          |       ++++|       ++++|
 /|\  |<+ + *>     |<+          |      <++++|      <++++|
  |   |   v        |   ^    ****|       ++++|           |
  |   |        ^   |++++    v   |       v    |           |
North |    <+ + +>|          +>|         ->|****>       |
  |   |     + + + |           + |          - |++++       |
      |     + + + |           + |          + |  v        |
       --------------------------------------------------
      | G/C= .246 | G/C= .213 | G/C= .000 | G/C= .408 |
      | G=  22.1" | G=  19.1" | G=     .0" | G=  36.8" |
      | Y+R= 4.0" | Y+R= 4.0" | Y+R=   .0" | Y+R= 4.0" |
      | OFF=  .0% | OFF=29.0% | OFF=54.7% | OFF=54.7% |
       --------------------------------------------------
       C= 90 sec   G= 78.0 sec = 86.7%  Y=12.0 sec = 13.3%  Ped=  .0 sec =   .0%

------------------------------------------------------------------------------
| Lane    |Width/|      g/C      | Service Rate|  Adj |       |  HCM   | L |90% Max|
|  Group  | Lanes| Reqd   Used  | @C (vph) @E |Volume|  v/c  | Delay  | S | Queue |
------------------------------------------------------------------------------

 N Approach                                                   17.0   C+
==============================================================================
|   RT    | 12/1 | .235 | .514 |  738 |  814 |  218 | .268 |   9.4 | B+| 134 ft|
|   TH    | 12/1 | .158 | .257 |  314 |  478 |   53 | .111 |  19.4 | C+|  50 ft|
|   LT    | 12/1 | .255 | .257 |  201 |  320 |  198 | .611 |  24.8 |*C | 186 ft|
------------------------------------------------------------------------------

 S Approach                                                   14.0   B
==============================================================================
|   RT    | 12/1 | .363 | .514 |  738 |  814 |  460 | .565 |  12.1 | B | 283 ft|
|   TH    | 12/1 | .171 | .257 |  314 |  478 |   99 | .207 |  20.0 | C+|  93 ft|
|   LT    | 12/1 | .162 | .257 |  244 |  382 |   53 | .138 |  19.6 | C+|  50 ft|
------------------------------------------------------------------------------

 E Approach                                                   21.7   C
==============================================================================
|   RT    | 12/1 | .182 | .420 |  564 |  664 |  110 | .166 |  12.4 | B |  81 ft|
|   TH    | 36/3 | .399 | .420 | 2200 | 2344 | 2066 | .881 |  21.4 | C | 506 ft|
|   LT    | 24/2 | .222 | .224 |  491 |  792 |  483 | .610 |  24.9 |*C | 237 ft|
------------------------------------------------------------------------------

 W Approach                                                   24.0   C
==============================================================================
|   RT    | 12/1 | .166 | .420 |  564 |  664 |   70 | .105 |  12.1 | B |  51 ft|
|   TH    | 36/3 | .417 | .420 | 2200 | 2344 | 2182 | .931 |  24.4 |*C | 534 ft|
|   LT    | 24/2 | .211 | .224 |  491 |  792 |  428 | .540 |  24.0 | C | 210 ft|
------------------------------------------------------------------------------
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97-036

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TOWN & COUNTRY                                                    10/22/97
WINCHESTER/OLSEN                                                  13:46:48
SATURDAY PEAK


SIGNAL94/TEAPAC[V1 L1.4] - Capacity Analysis Summary

Intersection Averages:
     Degree of Saturation (v/c)  .85  Vehicle Delay  30.6  Level of Service D+

      -------------------------------------------
Sq 42 |  Phase 1  |  Phase 2  |  Phase 3  |  Phase 4  |
**/** -------------------------------------------
      |     + ^   | + +       |       ^   |       ^   |
  .   |     + ++++| + +       |      ++++|      ++++|
 /|\  |     +>    |<+ +       |     <++++|     <++++|
  |   |           |   v       |      ****|   ^       |
  |   |           |       ^   |      v   |++++       |
North |    <*     |       * *>|          |****>      |
  |   |     *     |       * * |          |****       |
      |     *     |       * * |          |   v       |
      -------------------------------------------
      | G/C= .081 | G/C= .356 | G/C= .183 | G/C= .202 |
      | G=   7.3" | G=  32.1" | G=  16.5" | G=  18.1" |
      | Y+R= 4.0" | Y+R= 4.0" | Y+R= 4.0" | Y+R= 4.0" |
      | OFF=  .0% | OFF=12.6% | OFF=52.6% | OFF=75.4% |
      -------------------------------------------
      C= 90 sec   G= 74.0 sec = 82.2%  Y=16.0 sec = 17.8%  Ped=  .0 sec =   .0%

-----------------------------------------------------------------------------
| Lane    |Width/|     g/C      | Service Rate|  Adj  |      | HCM  | L |90% Max|
|  Group  | Lanes| Reqd   Used  | @C (vph) @E |Volume|  v/c | Delay | S | Queue |
-----------------------------------------------------------------------------

 N Approach                                                 22.1   C
=============================================================================
|   TH+RT| 36/3 | .336 | .367 | 1832 | 2026 | 1626 | .803 |  21.1 | C | 434 ft|
|   LT   | 12/1 | .176 | .092 |    1 |  147 |  107 | .656 |  36.2 | D | 123 ft|
-----------------------------------------------------------------------------

 S Approach                                                 37.5   D
=============================================================================
|   TH+RT| 36/3 | .398 | .367 | 1800 | 1993 | 1995 |1.001 |  37.4 |*D | 532 ft|
|   LT   | 12/1 | .179 | .092 |    1 |  147 |  117 | .718 |  39.6 |*D | 134 ft|
-----------------------------------------------------------------------------

 E Approach                                                 27.9   D+
=============================================================================
|   RT   | 12/1 | .196 | .566 |  833 |  896 |  140 | .156 |   7.1 | B+|  77 ft|
|   TH   | 12/1 | .149 | .441 |  721 |  821 |   16 | .019 |  10.8 | B |  25 ft|
|   LT   | 12/1 | .255 | .194 |  156 |  338 |  292 | .849 |  38.9 |*D | 298 ft|
-----------------------------------------------------------------------------

 W Approach                                                 34.8   D
=============================================================================
|   TH+RT| 12/1 | .271 | .213 |  179 |  337 |  293 | .857 |  39.0 |*D | 292 ft|
|   LT   | 12/1 | .177 | .213 |  188 |  353 |  103 | .289 |  22.7 | C | 103 ft|
-----------------------------------------------------------------------------
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97-036

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TOWN & COUNTRY                                                    10/22/97
WINCHESTER/OLSEN                                                  13:46:54
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TOWN & COUNTRY                                                10/22/97
WINCHESTER/OLSEN                                              13:45:58
SATURDAY PEAK REDWOOD ACCESS


SIGNAL94/TEAPAC[V1 L1.4] - Capacity Analysis Summary

Intersection Averages:
     Degree of Saturation (v/c)  .85  Vehicle Delay  30.6  Level of Service D+

      -------------------------------------------------
Sq 42 |  Phase 1   |  Phase 2   |  Phase 3   |  Phase 4   |
**/** -------------------------------------------------
      |      + ^   | + +        |       ^    |       ^    |
  .   |      + ++++| + +        |        ++++|        ++++|
 /|\  |       +>   |<+ +        |       <++++|       <++++|
  |   |            |   v        |        ****|   ^        |
  |   |            |       ^    |       v    |++++        |
North |     <*     |        * *>|            |****>       |
  |   |      *     |        * * |            |****        |
      |      *     |        * * |            |   v        |
      -------------------------------------------------
      | G/C= .081  | G/C= .356  | G/C= .183  | G/C= .202  |
      | G=   7.3"  | G=  32.1"  | G=  16.5"  | G=  18.1"  |
      | Y+R= 4.0"  | Y+R= 4.0"  | Y+R= 4.0"  | Y+R= 4.0"  |
      | OFF=  .0%  | OFF=12.6%  | OFF=52.6%  | OFF=75.4%  |
      -------------------------------------------------
      C= 90 sec   G= 74.0 sec = 82.2%  Y=16.0 sec = 17.8%  Ped=  .0 sec =   .0%

-------------------------------------------------------------------------------
| Lane   |Width/|     g/C     | Service Rate|  Adj  |       |  HCM  | L |90% Max|
|  Group | Lanes| Reqd   Used | @C (vph) @E |Volume|  v/c  | Delay | S | Queue |
-------------------------------------------------------------------------------

 N Approach                                                   22.1    C
===============================================================================
|   TH+RT| 36/3 | .336 | .367 | 1832 | 2026 | 1626 | .803 |  21.1 | C | 434 ft|
|   LT   | 12/1 | .176 | .092 |    1 |  147 |  107 | .656 |  36.2 | D | 123 ft|
-------------------------------------------------------------------------------

 S Approach                                                   37.5    D
===============================================================================
|   TH+RT| 36/3 | .398 | .367 | 1800 | 1993 | 1995 |1.001 |  37.4 |*D | 532 ft|
|   LT   | 12/1 | .179 | .092 |    1 |  147 |  117 | .718 |  39.6 |*D | 134 ft|
-------------------------------------------------------------------------------

 E Approach                                                   27.9    D+
===============================================================================
|   RT   | 12/1 | .196 | .566 |  833 |  896 |  140 | .156 |   7.1 | B+|  77 ft|
|   TH   | 12/1 | .149 | .441 |  721 |  821 |   16 | .019 |  10.8 | B |  25 ft|
|   LT   | 12/1 | .255 | .194 |  156 |  338 |  292 | .849 |  38.9 |*D | 298 ft|
-------------------------------------------------------------------------------

 W Approach                                                   34.8    D
===============================================================================
|   TH+RT| 12/1 | .271 | .213 |  179 |  337 |  293 | .857 |  39.0 |*D | 292 ft|
|   LT   | 12/1 | .177 | .213 |  188 |  353 |  103 | .289 |  22.7 | C | 103 ft|
-------------------------------------------------------------------------------
```

97-036

```
TOWN & COUNTRY                                                      10/22/97
WINCHESTER/OLSEN                                                    13:48:[illegible]
SATURDAY PEAK DUDLEY ACCESS


SIGNAL94/TEAPAC[V1 L1.4] - Capacity Analysis Summary

Intersection Averages:
     Degree of Saturation (v/c)  .83  Vehicle Delay  26.6  Level of Service D+

      ----------------------------------------------
Sq 42 |  Phase 1  |  Phase 2  |  Phase 3  |  Phase 4  |
**/** ----------------------------------------------
      |     + ^   | + +       |        ^  |        ^  |
  .   |     + ++++| + +       |     ++++|       ++++|
 /|\  |     +>    |<+ +       |    <++++|      <++++|
  |   |           |   v       |     ****|   ^       |
  |   |           |       ^   |       v |++++       |
North |    <*     |      * *> |         |****>      |
  |   |     *     |      * *  |         |****       |
      |     *     |      * *  |         |   v       |
      ----------------------------------------------
      | G/C= .085 | G/C= .358 | G/C= .168 | G/C= .211 |
      | G=   7.7" | G=  32.2" | G=  15.2" | G=  19.0" |
      | Y+R= 4.0" | Y+R= 4.0" | Y+R= 4.0" | Y+R= 4.0" |
      | OFF=  .0% | OFF=13.0% | OFF=53.2% | OFF=74.5% |
      ----------------------------------------------
      C= 90 sec   G= 74.0 sec = 82.2%  Y=16.0 sec = 17.8%  Ped=  .0 sec =   .0%

---------------------------------------------------------------------------
| Lane   |Width/|     g/C     | Service Rate|  Adj |      | HCM   | L |90% Max|
|  Group | Lanes| Reqd   Used | @C (vph) @E |Volume|  v/c | Delay | S | Queue |
---------------------------------------------------------------------------

 N Approach                                              21.8    C
===========================================================================
|   TH+RT| 36/3 | .336 | .369 | 1843 | 2035 | 1626 | .799 |  21.0 | C | 433 ft|
|   LT   | 12/1 | .176 | .096 |    1 |  154 |  107 | .629 |  34.7 | D | 122 ft|
---------------------------------------------------------------------------

 S Approach                                              30.1    D+
===========================================================================
|   TH+RT| 36/3 | .385 | .369 | 1820 | 2012 | 1925 | .957 |  29.6 |*D+| 512 ft|
|   LT   | 12/1 | .179 | .096 |    1 |  154 |  117 | .688 |  37.3 |*D | 134 ft|
---------------------------------------------------------------------------

 E Approach                                              24.9    C
===========================================================================
|   RT   | 12/1 | .196 | .564 |  831 |  894 |  140 | .157 |   7.1 | B+|  77 ft|
|   TH   | 12/1 | .149 | .435 |  708 |  810 |   16 | .020 |  11.0 | B |  25 ft|
|   LT   | 12/1 | .237 | .180 |  118 |  310 |  252 | .792 |  35.6 |*D | 262 ft|
---------------------------------------------------------------------------

 W Approach                                              31.7    D+
===========================================================================
|   TH+RT| 12/1 | .271 | .222 |  197 |  353 |  293 | .821 |  35.0 |*D | 288 ft|
|   LT   | 12/1 | .177 | .222 |  207 |  369 |  103 | .277 |  22.2 | C | 101 ft|
---------------------------------------------------------------------------
```

97-036

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TOWN & COUNTRY                                                      10/22/97
WINCHESTER/OLSEN                                                    13:48:24
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TOWN & COUNTRY                                                    10/22/97
WINCHESTER/OLSEN                                                  13:49:53
SATURDAY PEAK REDWOOD & DUDLEY ACCESS


SIGNAL94/TEAPAC[V1 L1.4] - Capacity Analysis Summary

Intersection Averages:
     Degree of Saturation (v/c)  .83  Vehicle Delay  26.6  Level of Service D+

      --------------------------------------------
Sq 42 |  Phase 1  |  Phase 2  |  Phase 3  |  Phase 4  |
**/** --------------------------------------------
      |     + ^   | + +       |       ^   |       ^   |
  .   |     + ++++| + +       |      ++++|       ++++|
 /|\  |     +>    |<+ +       |     <++++|      <++++|
  |   |           |   v       |      ****|  ^        |
  |   |           |        ^  |      v   |++++       |
North |    <*     |      * *>|           |****>      |
  |   |     *     |      * *  |           |****       |
      |     *     |      * *  |           |  v        |
      --------------------------------------------
      | G/C= .085 | G/C= .358 | G/C= .168 | G/C= .211 |
      | G=   7.7" | G=  32.2" | G=  15.2" | G=  19.0" |
      | Y+R= 4.0" | Y+R= 4.0" | Y+R= 4.0" | Y+R= 4.0" |
      | OFF=  .0% | OFF=13.0% | OFF=53.2% | OFF=74.5% |
      --------------------------------------------
      C= 90 sec   G= 74.0 sec = 82.2%  Y=16.0 sec = 17.8%  Ped=  .0 sec =   .0%

----------------------------------------------------------------------
| Lane   |Width/|     g/C      | Service Rate|  Adj |      | HCM  | L |90% Max|
|  Group | Lanes| Reqd   Used  | @C (vph) @E |Volume|  v/c | Delay| S | Queue |
----------------------------------------------------------------------

 N Approach                                             21.8   C
======================================================================
|  TH+RT| 36/3 | .336 | .369 | 1843 | 2035 | 1626 | .799 |  21.0 | C | 433 ft|
|  LT   | 12/1 | .176 | .096 |    1 |  154 |  107 | .629 |  34.7 | D | 122 ft|
----------------------------------------------------------------------

 S Approach                                             30.1   D+
======================================================================
|  TH+RT| 36/3 | .385 | .369 | 1820 | 2012 | 1925 | .957 |  29.6 |*D+| 512 ft|
|  LT   | 12/1 | .179 | .096 |    1 |  154 |  117 | .688 |  37.3 |*D | 134 ft|
----------------------------------------------------------------------

 E Approach                                             24.9   C
======================================================================
|  RT   | 12/1 | .196 | .564 |  831 |  894 |  140 | .157 |   7.1 | B+|  77 ft|
|  TH   | 12/1 | .149 | .435 |  708 |  810 |   16 | .020 |  11.0 | B |  25 ft|
|  LT   | 12/1 | .237 | .180 |  118 |  310 |  252 | .792 |  35.6 |*D | 262 ft|
----------------------------------------------------------------------

 W Approach                                             31.7   D+
======================================================================
|  TH+RT| 12/1 | .271 | .222 |  197 |  353 |  293 | .821 |  35.0 |*D | 288 ft|
|  LT   | 12/1 | .177 | .222 |  207 |  369 |  103 | .277 |  22.2 | C | 101 ft|
----------------------------------------------------------------------


TOWN & COUNTRY                                                    10/22/97
WINCHESTER/OLSEN                                                  13:49:43
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97-036

E

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TOWN & COUNTRY                                                  . 22/97
WINCHESTER/OLIN                                                  :5 :5
SATURDAY PEAK


SIGNAL94/TEAPAC[V1 L1.4] - Capacity Analysis Summary

Intersection Averages:
      Degree of Saturation (v/c)  .70  Vehicle Delay  20.0  Level of Service C+

      -------------------------------------------------
Sq 42 |  Phase 1  |  Phase 2  |  Phase 3  |  Phase 4  |
**/** -------------------------------------------------
      |      * ^  | + +       |         ^ |         ^ |
  .   |      * ++++| + +      |      ++++|       ++++|
 /|\  |      *>   |<+ +       |     <++++|      <++++|
  |   |           |   v       |      ****|  ^        |
  |   |           |        ^  |       v  |++++       |
North |    <+     |       * *>|          |****>      |
  |   |     +     |       * * |          |****       |
      |     +     |       * * |          |  v        |
      -------------------------------------------------
      | G/C= .251 | G/C= .380 | G/C= .120 | G/C= .071 |
      | G=  22.6" | G=  34.2" | G=  10.8" | G=   6.4" |
      | Y+R= 4.0" | Y+R= 4.0" | Y+R= 4.0" | Y+R= 4.0" |
      | OFF=  .0% | OFF=29.6% | OFF=72.0% | OFF=88.5% |
      -------------------------------------------------
      C= 90 sec   G= 74.0 sec = 82.2%  Y=16.0 sec = 17.8%  Ped=  .0 sec =   .0%

------------------------------------------------------------------------------
| Lane   |Width/|    g/C      | Service Rate|  Adj |       |  HCM  | L |90% Max|
|  Group | Lanes| Reqd   Used | @C (vph) @E |Volume|   v/c | Delay | S | Queue |
------------------------------------------------------------------------------

 N Approach                                                    19.3    C+
==============================================================================
|   TH+RT| 36/3 | .308 | .391 | 2006 | 2176 | 1447 | .665 |  17.7 | C+| 371 ft|
|   LT   | 12/1 | .274 | .262 |  308 |  464 |  332 | .716 |  26.5 |*D+| 310 ft|
------------------------------------------------------------------------------

 S Approach                                                    20.4    C
==============================================================================
|   TH+RT| 36/3 | .357 | .391 | 1996 | 2166 | 1768 | .816 |  20.4 |*C | 454 ft|
|   LT   | 12/1 | .153 | .262 |  308 |  464 |   33 | .071 |  19.0 | C+|  31 ft|
------------------------------------------------------------------------------

 E Approach                                                    17.8    C+
==============================================================================
|   RT   | 12/1 | .227 | .542 |  789 |  858 |  204 | .238 |   8.3 | B+| 118 ft|
|   TH   | 12/1 | .147 | .247 |  291 |  459 |   10 | .022 |  19.5 | C+|  25 ft|
|   LT   | 12/1 | .189 | .131 |    1 |  219 |  143 | .614 |  31.4 |*D+| 157 ft|
------------------------------------------------------------------------------

 W Approach                                                    30.9    D+
==============================================================================
|   TH+RT| 12/1 | .162 | .082 |    1 |  116 |   58 | .436 |  31.4 |*D+|  67 ft|
|   LT   | 12/1 | .159 | .082 |    1 |  123 |   51 | .364 |  30.5 | D+|  59 ft|
------------------------------------------------------------------------------
```

97-036

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TOWN & COUNTRY                                                  10/22/97
WINCHESTER/OLIN                                                 13:52:18
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TOWN & COUNTRY                                                        10/22/97
WINCHESTER/TISCH                                                      14:03:28
SATURDAY PEAK DUDLEY ACCESS


SIGNAL94/TEAPAC[V1 L1.4] - Capacity Analysis Summary

Intersection Averages:
     Degree of Saturation (v/c)  .58  Vehicle Delay  13.1   Level of Service B

      ---------------------------------
Sq 31 |  Phase 1  |  Phase 2  |  Phase 3  |
**/** ---------------------------------
      |           | * * +     |     ^     |
  .   |           | * * +     |      ++++|
 /|\  |           |<* * +>    |     <++++|
  |   |           |   v       |      ****|
  |   |       ^   |       ^   |      v    |
North |   <* + +>|       + +>|           |
  |   |     * + + |       + + |           |
      |     * + + |       + + |           |
      ---------------------------------
      | G/C= .261 | G/C= .457 | G/C= .149 |
      | G=  23.5" | G=  41.1" | G=  13.4" |
      | Y+R= 4.0" | Y+R= 4.0" | Y+R= 4.0" |
      | OFF=  .0% | OFF=30.5% | OFF=80.7% |
      ---------------------------------
     C= 90 sec   G= 78.0 sec = 86.7%  Y=12.0 sec = 13.3%  Ped=  .0 sec =   .0%

-----------------------------------------------------------------------------
| Lane    |Width/|     g/C      | Service Rate| Adj  |       |  HCM  | L |90% Max|
|  Group  | Lanes| Reqd   Used  | @C (vph) @E |Volume|  v/c  | Delay | S | Queue |
-----------------------------------------------------------------------------

 N Approach                                                     18.6   C+
=============================================================================
|   TH+RT| 36/3 | .430 | .468 | 2412 | 2516 | 2175 | .864 |  18.7 |*C+| 488 ft|
|   LT   | 12/1 | .193 | .468 |   73 |   98 |   28 | .264 |  11.4 | B |  25 ft|
-----------------------------------------------------------------------------

 S Approach                                                      6.5   B+
=============================================================================
|   TH+RT| 36/3 | .429 | .774 | 4244 | 4244 | 2219 | .523 |   3.0 | A | 212 ft|
|   LT   | 12/1 | .288 | .272 |  329 |  481 |  363 | .755 |  27.4 |*D+| 334 ft|
-----------------------------------------------------------------------------

 E Approach                                                     28.8   D+
=============================================================================
|   TH+RT| 24/2 | .161 | .160 |  120 |  574 |  126 | .220 |  25.1 | D+|  67 ft|
|   LT   | 12/1 | .209 | .160 |   58 |  272 |  191 | .675 |  31.3 |*D+| 203 ft|
-----------------------------------------------------------------------------


TOWN & COUNTRY                                                        10/22/97
WINCHESTER/TISCH                                                      14:03:43
SATURDAY PEAK DUDLEY ACCESS


SIGNAL94/TEAPAC[V1 L1.4] - Data and File Management


   56 lines SAVEd from Line    1 to   56 in File #1: WINTIS2C
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97-036

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TOWN & COUNTRY                                                      10/22/97
WINCHESTER/TISCH                                                    14:05:54
SATURDAY PEAK REDWOOD & DUDLEY ACCESS


SIGNAL94/TEAPAC[V1 L1.4] - Capacity Analysis Summary

Intersection Averages:
     Degree of Saturation (v/c)  .68  Vehicle Delay  13.1  Level of Service B

      ------------------------------------
Sq 31 |  Phase 1  |  Phase 2  |  Phase 3  |
**/** ------------------------------------
      |           | * * +     |       ^   |
  .   |           | * * +     |      ++++|
 /|\  |           |<* * +>    |     <++++|
  |   |           |   v       |      ****|
  |   |       ^   |       ^   |      v    |
North |   <* + +>|       + +>|           |
  |   |     * + + |       + + |           |
      |     * + + |       + + |           |
      ------------------------------------
      | G/C= .261 | G/C= .457 | G/C= .149 |
      | G=  23.5" | G=  41.1" | G=  13.4" |
      | Y+R= 4.0" | Y+R= 4.0" | Y+R= 4.0" |
      | OFF=  .0% | OFF=30.5% | OFF=80.7% |
      ------------------------------------
      C= 90 sec   G= 78.0 sec = 86.7%  Y=12.0 sec = 13.3%  Ped=  .0 sec =   .0%

---------------------------------------------------------------------------
| Lane    |Width/|     g/C     | Service Rate| Adj  |      |  HCM  | L |90% Max|
|  Group  | Lanes| Reqd   Used | @C (vph) @E |Volume|  v/c | Delay | S | Queue |
---------------------------------------------------------------------------

 N Approach                                                18.6   C+
===========================================================================
|   TH+RT| 36/3 | .430 | .468 | 2413 | 2517 | 2177 | .865 |  18.7 |*C+| 488 ft|
|   LT   | 12/1 | .193 | .468 |   73 |   98 |   28 | .264 |  11.4 | B |  25 ft|
---------------------------------------------------------------------------

 S Approach                                                 6.5   B+
===========================================================================
|   TH+RT| 36/3 | .429 | .774 | 4245 | 4245 | 2219 | .523 |   3.0 | A | 212 ft|
|   LT   | 12/1 | .288 | .272 |  329 |  481 |  363 | .755 |  27.4 |*D+| 334 ft|
---------------------------------------------------------------------------

 E Approach                                                28.8   D+
===========================================================================
|   TH+RT| 24/2 | .161 | .160 |  119 |  574 |  126 | .220 |  25.1 | D+|  67 ft|
|   LT   | 12/1 | .209 | .160 |   58 |  272 |  191 | .675 |  31.3 |*D+| 203 ft|
---------------------------------------------------------------------------


TOWN & COUNTRY                                                      10/22/97
WINCHESTER/TISCH                                                    14:06:06
SATURDAY PEAK REDWOOD & DUDLEY ACCESS


SIGNAL94/TEAPAC[V1 L1.4] - Data and File Management

   56 lines SAVEd from Line    1 to   56 in File #1: WINTIS3C
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97-036

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TOWN & COUNTRY                                                       10/22/97
WINCHESTER/TISCH                                                     13:58:46
SATURDAY PEAK


SIGNAL94/TEAPAC[V1 L1.4] - Capacity Analysis Summary

Intersection Averages:
     Degree of Saturation (v/c)  .69  Vehicle Delay  13.2  Level of Service B

       -----------------------------------
Sq 31 |  Phase 1  |  Phase 2  |  Phase 3  |
**/** -----------------------------------
      |           | * * +     |        ^  |
  .   |           | * * +     |      ++++ |
 /|\  |           |<* * +>    |     <++++ |
  |   |           |   v       |      **** |
  |   |      ^    |      ^    |        v  |
North |   <* + +> |      + +> |           |
  |   |    * + +  |      + +  |           |
      |    * + +  |      + +  |           |
       -----------------------------------
      | G/C= .258 | G/C= .462 | G/C= .147 |
      | G=  23.2" | G=  41.6" | G=  13.2" |
      | Y+R= 4.0" | Y+R= 4.0" | Y+R= 4.0" |
      | OFF=  .0% | OFF=30.2% | OFF=80.9% |
       -----------------------------------
      C= 90 sec   G= 78.0 sec = 86.7%  Y=12.0 sec = 13.3%  Ped=  .0 sec =   .0%

-----------------------------------------------------------------------------
| Lane   |Width/|     g/C     | Service Rate|  Adj  |      |  HCM  | L |90% Max|
| Group  | Lanes| Reqd   Used | @C (vph) @E |Volume|  v/c | Delay | S | Queue |
-----------------------------------------------------------------------------

 N Approach                                                  18.8    C+
=============================================================================
|  TH+RT| 36/3 | .438 | .473 | 2434 | 2535 | 2219 | .875 |  18.9 |*C+| 493 ft|
|  LT   | 12/1 | .193 | .473 |   74 |   99 |   28 | .262 |  11.2 | B |  25 ft|
-----------------------------------------------------------------------------

 S Approach                                                   6.5    B+
=============================================================================
|  TH+RT| 36/3 | .428 | .775 | 4274 | 4274 | 2221 | .520 |   3.0 | A | 210 ft|
|  LT   | 12/1 | .288 | .269 |  323 |  476 |  363 | .763 |  27.9 |*D+| 336 ft|
-----------------------------------------------------------------------------

 E Approach                                                  29.6    D+
=============================================================================
|  TH+RT| 24/2 | .155 | .158 |  105 |  557 |   84 | .151 |  24.8 | C |  45 ft|
|  LT   | 12/1 | .209 | .158 |   52 |  269 |  191 | .682 |  31.7 |*D+| 203 ft|
-----------------------------------------------------------------------------


TOWN & COUNTRY                                                       10/22/97
WINCHESTER/TISCH                                                     13:58:59
SATURDAY PEAK


SIGNAL94/TEAPAC[V1 L1.4] - Data and File Management


   56 Lines SAVEd from Line    1 to    56 in File #1: WINTISSC
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97-036

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TOWN & COUNTRY                                                  10/22/97
WINCHESTER/TISCH                                                14:01:09
SATURDAY PEAK REDWOOD ACCESS


SIGNAL94/TEAPAC[V1 L1.4] - Capacity Analysis Summary

Intersection Averages:
     Degree of Saturation (v/c)  .69  Vehicle Delay  13.2  Level of Service B

      ----------------------------------
Sq 31 |  Phase 1  |  Phase 2  |  Phase 3  |
**/** ----------------------------------
      |           | * * +     |      ^    |
  .   |           | * * +     |      ++++|
 /|\  |           |<* * +>    |     <++++|
  |   |           |   v       |      ****|
  |   |       ^   |       ^   |      v    |
North |    <* + +>|      + +>|           |
  |   |     * + + |      + + |           |
      |     * + + |      + + |           |
      ----------------------------------
      | G/C= .258 | G/C= .462 | G/C= .147 |
      | G=  23.2" | G=  41.6" | G=  13.2" |
      | Y+R= 4.0" | Y+R= 4.0" | Y+R= 4.0" |
      | OFF=  .0% | OFF=30.2% | OFF=80.9% |
      ----------------------------------
      C= 90 sec   G= 78.0 sec = 86.7%  Y=12.0 sec = 13.3%  Ped=  .0 sec =   .0%

--------------------------------------------------------------------------
| Lane    |Width/|      g/C      | Service Rate|  Adj |      |  HCM    L |90% Max|
|  Group  | Lanes| Reqd   Used  | @C (vph) @E |Volume|  v/c | Delay  S | Queue |
--------------------------------------------------------------------------

 N Approach                                                18.8   C+
==========================================================================
|   TH+RT| 36/3 | .438 | .473 | 2434 | 2535 | 2219 | .875 |  18.9 |*C+| 493 ft|
|   LT   | 12/1 | .193 | .473 |   74 |   99 |   28 | .262 |  11.2    B |  25 ft|
--------------------------------------------------------------------------

 S Approach                                                 6.5   B+
==========================================================================
|   TH+RT| 36/3 | .428 | .775 | 4274 | 4274 | 2221 | .520 |   3.0 | A | 210 ft|
|   LT   | 12/1 | .288 | .269 |  323 |  476 |  363 | .763 |  27.9 |*D+| 336 ft|
--------------------------------------------------------------------------

 E Approach                                                29.6   D+
==========================================================================
|   TH+RT| 24/2 | .155 | .158 |  105 |  557 |   84 | .151 |  24.8 | C |  45 ft|
|   LT   | 12/1 | .209 | .158 |   52 |  269 |  191 | .682 |  31.7 |*D+| 203 ft|
--------------------------------------------------------------------------


TOWN & COUNTRY                                                  10/22/97
WINCHESTER/TISCH                                                14:01:22
SATURDAY PEAK REDWOOD ACCESS


SIGNAL94/TEAPAC[V1 L1.4] - Data and File Management


   56 lines SAVEd from Line    1 to   56 in File #1: WINTIS1C
```

97-036

Appendix I

Trip Generation for Project Land Use Alternative

Table I-1

Trip Generation Estimates for Town & Country Shopping Center w/o Car Dealership (AM Peak Hour)

	Project Without Car Dealership							Project With Car Dealership						
Project Description	Size (1000 s.f.)	Peak-Hour Rate	Capture Reduction	Pass-By Reduction	In	Out	Total	Size (1000 s.f.)	Peak-Hour Rate	Capture Reduction	Pass-By Reduction	In	Out	Total
Shopping Center (Proposed)	650	0.76	10%	0%	280	165	445	600	0.78	10%	0%	265	156	421
Less Shopping Center (Existing)	285	1.06	0%	0%	190	112	302	285	1.06	0%	0%	190	112	302
Less Car Dealership (Existing)					47	18	65							
Added Trips From Shopping Center					43	35	78					75	44	119
Residential Dwelling Units	1200	0.44	10%	0%	114	361	475	1200	0.44	10%	0%	114	361	475
Hotel	200	0.67	0%	0%	80	54	134	200	0.67	0%	0%	80	54	134
Net Added Trips					237	450	687					269	459	728

Note: Peak-hour trip generation totals reflect reductions ffor internal capture and pass-by trips.
Source: Rates per 1,000 s.f. or per d.u., from ITE Trip Generation manual, 5th Edition, 1991

Trip Generation Estimates for Town & Country Shopping Center w/o Car Dealership (PM Peak Hour)

	Project Without Car Dealership							Project With Car Dealership						
Project Description	Size (1000 s.f.)	Peak-Hour Rate	Capture Reduction	Pass-By Reduction	In	Out	Total	Size (1000 s.f.)	Peak-Hour Rate	Capture Reduction	Pass-By Reduction	In	Out	Total
Shopping Center (Proposed)	650	3.3	10%	25%	697	697	1,394	600	3.4	10%	25%	663	663	1,326
Less Shopping Center (Existing)	285	4.51	0%	32%	437	437	874	285	4.51	0%	32%	437	437	874
Less Car Dealership (Existing)					52	63	115							
Added Trips From Shopping Center					208	197	405					226	226	452
Residential Dwelling Units	1200	0.49	10%	0%	339	191	529	1200	0.49	10%	0%	339	191	529
Hotel	200	0.76	0%	0%	82	70	152	200	0.76	0%	0%	82	70	152
Net Added Trips					629	458	1,086					647	487	1,133

Note: Peak-hour trip generation totals reflect reductions ffor internal capture and pass-by trips
Source: Rates per 1,000 s.f. or per d.u., from ITE Trip Generation manual, 5th Edition, 1991

Trip Generation Estimates for Town & Country Shopping Center w/o Car Dealership (Saturday Peak Hour)

	Project Without Car Dealership							Project With Car Dealership						
Project Description	Size (1000 s.f.)	Peak-Hour Rate	Capture Reduction	Pass-By Reduction	In	Out	Total	Size (1000 s.f.)	Peak-Hour Rate	Capture Reduction	Pass-By Reduction	In	Out	Total
Shopping Center (Proposed)	650	3.3	10%	25%	718	718	1,436	600	3.4	10%	25%	683	683	1,366
Less Shopping Center (Existing)	285	4.51	0%	32%	450	450	900	285	4.51	0%	32%	450	450	900
Less Car Dealership (Existing)					44	43	87							
Added Trips From Shopping Center					224	225	449					233	233	466
Residential Dwelling Units	1200	0.49	10%	0%	339	191	529	1200	0.49	10%	0%	339	191	529
Hotel	200	0.76	0%	0%	82	70	152	200	0.76	0%	0%	82	70	152
Net Added Trips					645	486	1,130					654	494	1,147

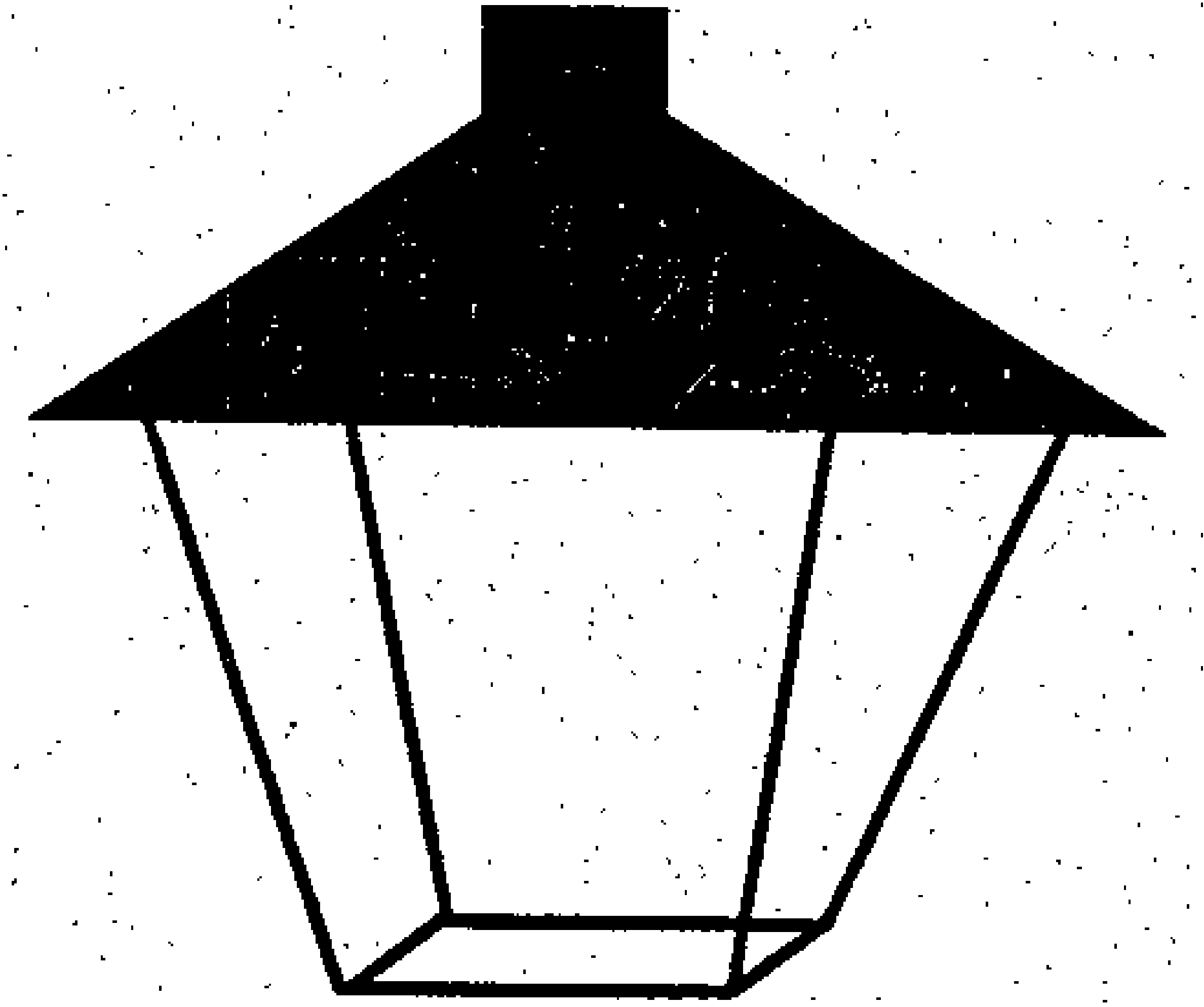
Note: Peak-hour trip generation totals reflect reductions ffor internal capture and pass-by trips.
Source: Rates per 1,000 s.f. or per d.u., from ITE Trip Generation manual, 5th Edition, 1991.

97-036

FINAL

ENVIRONMENTAL IMPACT REPORT

TOWN AND COUNTRY VILLAGE



CITY OF SAN JOSE

JUNE 1998

97-036

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VOLUME III OF IV : DRAFT EIR APPENDICES B-G

APPENDIX B

AIR QUALITY ANALYSIS

AIR QUALITY IMPACT ANALYSIS FOR THE TOWN AND COUNTRY VILLAGE PROJECT, SAN JOSE

Prepared for:
David J. Powers and Associates
1885 The Alameda, Suite 204
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October 1997

97-036

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I. EXISTING CONDITIONS

Air Pollution Climatology

The amount of a given pollutant in the atmosphere is determined by the amount of pollutant released and the atmosphere's ability to transport and dilute the pollutant. The major determinants of transport and dilution are wind, atmospheric stability, terrain and, for photochemical pollutants, sunshine.

Northwest winds and northerly winds are most common in the project area, reflecting the orientation of the Bay and the San Francisco Peninsula. Winds from these directions carry pollutants released by autos and factories from upwind areas of the Peninsula toward San Jose, particularly during the summer months. Winds are lightest on the average in fall and winter. Every year in fall and winter there are periods of several days when winds are very light and local pollutants can build up.

Pollutants can be diluted by mixing in the atmosphere both vertically and horizontally. Vertical mixing and dilution of pollutants are often suppressed by inversion conditions, when a warm layer of air traps cooler air close to the surface. During the summer, inversions are generally elevated above ground level, but are present over 90 percent of the time in both the morning and afternoon. In winter, surface-based inversions dominate in the morning hours, but frequently dissipate by afternoon.

Topography can restrict horizontal dilution and mixing of pollutants by creating a barrier to air movement. The South Bay has significant terrain features that affect air quality. The Santa Cruz Mountains and Hayward Hills on either side of the South Bay restrict horizontal dilution, and this alignment of the terrain also channels winds from the north to south, carrying pollution from the northern Peninsula toward San Jose.

The combined effects of moderate ventilation, frequent inversions that restrict vertical dilution and terrain that restrict horizontal dilution give San Jose a relatively high atmospheric potential for pollution compared to other parts of the San Francisco Bay Air Basin.

Ambient Air Quality Standards

Both the U. S. Environmental Protection Agency and the California Air Resources Board have established ambient air quality standards for common pollutants. These ambient air quality standards are levels of contaminants which represent safe levels that avoid specific adverse health effects associated with each pollutant. The ambient air quality standards cover what are called "criteria" pollutants because the health and other effects of each pollutant are described in criteria documents. Table 1 identifies the major criteria pollutants, characteristics, health effects and typical sources.

The federal and California state ambient air quality standards are summarized in Table 2 for important pollutants. The federal and state ambient standards were developed independently with differing purposes and methods, although both processes attempted to avoid health-related effects. As a result, the federal and state standards differ in some cases. In general, the California state standards are more stringent. This is particularly true for ozone and PM-10.

The U.S. Environmental Protection Agency has recently announced new national air quality standards for ground-level ozone and for fine Particulate Matter. The existing 1-hour ozone standard of 0.12 PPM will be phased out and replaced by an 8-hour standard of 0.08 PPM. New national standards for fine Particulate Matter (diameter 2.5 microns or less) have also been established for 24-hour and annual averaging periods.

Table 1: Major Criteria Pollutants

Pollutant	Characteristics	Health Effects	Major Sources
Ozone	A highly reactive photochemical pollutant created by the action of sunshine on ozone precursors (primarily reactive hydrocarbons and oxides of nitrogen. Often called photochemical smog.	●Eye Irritation ●Respiratory function impairment.	The major sources ozone precursors are combustion sources such as factories and automobiles, and evaporation of solvents and fuels.
Carbon Monoxide	Carbon monoxide is an odorless, colorless gas that is highly toxic. It is formed by the incomplete combustion of fuels.	●Impairment of oxygen transport in the bloodstream. ●Aggravation of cardiovascular disease. ●Fatigue, headache, confusion, dizziness. ●Can be fatal in the case of very high concentrations.	Automobile exhaust, combustion of fuels, combustion of wood in woodstoves and fireplaces.
Nitrogen Dioxide	Reddish-brown gas that discolors the air, formed during combustion.	●Increased risk of acute and chronic respiratory disease.	Automobile and diesel truck exhaust, industrial processes, fossil-fueled power plants.
Sulfur Dioxide	Sulfur dioxide is a colorless gas with a pungent, irritating odor.	●Aggravation of chronic obstruction lung disease. ●Increased risk of acute and chronic respiratory disease.	Diesel vehicle exhaust, oil-powered power plants, industrial processes.
Particulate Matter	Solid and liquid particles of dust, soot, aerosols and other matter which are small enough to remain suspended in the air for a long period of time.	●Aggravation of chronic disease and heart/lung disease symptoms.	Combustion, automobiles, field burning, factories and unpaved roads. Also a result of photochemical processes.

Table 2: Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	Federal Primary Standard	State Standard
Ozone	1-Hour	0.12 PPM	0.09 PPM
Carbon Monoxide	8-Hour	9.0 PPM	9.0 PPM
	1-Hour	35.0 PPM	20.0 PPM
Nitrogen Dioxide	Annual Average	0.05 PPM	--
	1-Hour	--	0.25 PPM
Sulfur Dioxide	Annual Average	0.03 PPM	--
	24-Hour	0.14 PPM	0.05 PPM
	1-Hour	--	0.25 PPM
PM_{10}	Annual Average	50 μg/m^3	30 μg/m^3
	24-Hour	150 μg/m^3	50 μg/m^3
$PM_{2.5}$	Annual	15 μg/m^3	--
	24-Hour	65 μg/m^3	--
Lead	30-Day Avg.	--	1.5 μg/m^3
	Month Avg.	1.5 μg/m^3	--

PPM = Parts per Million

μg/m^3 = Micrograms per Cubic Meter

Ambient Air Quality

The Bay Area Air Quality Management District (BAAQMD) monitors air quality at several locations within the San Francisco Bay Air Basin. The monitoring site closest to the project site is in downtown San Jose. Table 3 summarizes exceedances of State and Federal standards at the downtown San Jose monitoring site during the period 1994-1996. Table 3 shows that ozone and PM_{10} exceed the state standards in the project area. Violations of the carbon monoxide standards had been recorded at the downtown San Jose site prior to 1992.

Of the three pollutants known to at times exceed the state and federal standards in the project area, two are regional pollutants. Both ozone and PM_{10} are considered regional pollutants in that concentrations are not determined by proximity to individual sources, but show a relative uniformity over a region. Thus, the data shown in Table 3 for ozone and PM_{10} provide a good characterization of levels of these pollutants on the project site.

Carbon monoxide is a local pollutant, i.e., high concentrations are normally only found very near sources. The major source of carbon monoxide, a colorless, odorless, poisonous gas, is automobile traffic. Elevated concentrations, therefore, are usually only found near areas of high traffic volumes.

The data shown in Table 3 for carbon monoxide are not necessarily representative of concentrations that would be found near the proposed project site. For this reason, concentrations of carbon monoxide have been estimated using a computer simulation model that predicts concentrations based on information on roadway locations, traffic volumes and traffic conditions. The results of this analysis are described in Section II, Project Impacts.

Table 3: Summary of Air Quality Data for Downtown San Jose[1,2]

Pollutant	**Standard**	**Days Exceeding Standard in:**		
		1994	**1995**	**1996**
Ozone	Federal 1-Hour	0	1	0
Ozone	State 1-Hour	3	14	5
Carbon Monoxide	State/Federal 8-Hour	0	0	0
PM_{10}	Federal 24-Hour	0	0	0
PM_{10}	State 24-Hour	10	4	2

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[1] California Air Resources Board, California Air Quality Data, Annual Summaries, 1994-1995.

[2] Bay Area Air Quality Management District, Air Currents, April 1997.

Attainment Status and Regional Air Quality Plans

The federal Clean Air Act and the California Clean Air Act of 1988 require that the State Air Resources Board, based on air quality monitoring data, designate portions of the state where the federal or state ambient air quality standards are not met as "nonattainment areas". Because of the differences between the national and state standards, the designation of nonattainment areas is different under the federal and state legislation.

Federal Air Quality Program

The Bay Area is currently a nonattainment area only for carbon monoxide. However, the U.S. Environmental Protection Agency has proposed reclassifying the Bay Area from "maintenance area" to nonattainment for ozone also based on recent violations of the federal standards at several locations in the air basin. This would reverse the air basin's reclassification to "maintenance area" for ozone in 1995. Reclassification would require an update to the region's federal air quality plan.

The revisions to the national ambient standards for ozone and Particulate Matter have no immediate effect on nonattainment planning. Existing ozone and Particulate Matter designations will remain in effect until U.S. E.P.A establishes new designations based on any new ozone or Particulate Matter standard. Final promulgation of guidance for development of nonattainment plans for any new ozone or Particulate Matter standard is scheduled for June of 1999.

State Air Quality Program

Under the California Clean Air Act Santa Clara County is a nonattainment area for ozone and PM_{10}. The county is either attainment or unclassified for other pollutants.

The California Clean Air Act requires local air pollution control districts to prepare air quality attainment plans. These plans must provide for district-wide emission reductions of five percent per year averaged over consecutive three-year periods or if not, provide for adoption of "all feasible measures on an expeditious schedule".

The current area-wide plan required by the California Clean Air Act was adopted in October 1994.[3] The Plan proposes the imposition of controls on stationary sources (factories, power plants, industrial sources, etc.) and Transportation Control Measures designed to reduce emissions from automobiles. Since the Plan does not provide for a 5% annual reduction in emissions, it proposes the adoption of "all feasible measures on an expeditious schedule".

Sensitive Receptors

The Bay Area Air Quality Management District defines sensitive receptors as facilities where sensitive receptor population groups (children, the elderly, the acutely ill and the chronically ill) are likely to located. These land uses include residences, schools playgrounds, child care centers, retirement homes, convalescent homes, hospitals and medical clinics. Existing residential areas north and east of the site along Redwood Avenue and Baywood and new residential areas under construction east of the site represent the closest sensitive receptors to the project site. The proposed project itself would contain residential uses that would be new sensitive receptors.

Significance Criteria

CEQA Guidelines provide that a project would normally have a significant air quality impact: if it would:

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[3] Bay Area Air Quality Management District, Bay Area '94 Clean Air Plan (CAP), 1994.

- Violate any ambient air quality standard, contribute substantially to an existing or projected air quality violation, or expose sensitive receptors to substantial pollutant concentrations (CEQA Guidelines, Appendix G (x)).

- Result in substantial emissions or deterioration of ambient air quality (CEQA Guidelines, Appendix I(II.2.a)).

- Create objectionable odors (CEQA Guidelines, Appendix I (II.2.b)).

- Alter air movement, moisture, or temperature, or result in any change in climate, either locally or regionally (CEQA Guidelines, Appendix I (II.2.c)).

For the purpose of this study, an impact is considered to be significant is any of the following conditions would result from implementation of the proposed project.

- For localized pollutants such as carbon monoxide, an increase in predicted concentrations that would cause a new violation of the most stringent State or Federal standard (20.0 PPM for one-hour, 9.0 PPM for eight-hours) or contribute substantially to an existing violation of the standards.

- The significance of regional emission increases is determined by comparison of project-related emissions to "thresholds of significance" suggested by the Bay Area Air Quality Management District. These thresholds are 80 pounds per day for ozone precursors and PM_{10}. The significance threshold for carbon monoxide is 550 pounds per day, although exceedance of this threshold only triggers the need for estimates of carbon monoxide "hot spot" concentrations.[4]

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[4] Bay Area Air Quality Management District, BAAQMD CEQA Guidelines, 1996.

II. PROJECT IMPACTS

Construction Impacts

Construction activities such as demolition, excavation and grading operations, construction vehicle traffic and wind blowing over exposed earth would generate exhaust emissions and fugitive particulate matter emissions that would affect local and regional air quality.

Demolition and site preparation activities would be the greatest source of air pollutant emissions during project construction. Removal of buildings and pavement materials and site grading would generate relatively large amounts of dust and PM_{10} and lesser amounts of equipment exhaust gases such as reactive organic gases, oxides of nitrogen and carbon monoxide.

Construction dust could affect local air quality at various times during construction of the project. The dry, windy climate of the area during the summer months creates a high potential for dust generation when and if underlying soils are exposed to the atmosphere.

The local effects of construction activities would include increased dustfall and locally elevated levels of PM_{10} downwind of construction activity. Depending on the weather, soil conditions, the amount of activity taking place and nature of dust control efforts these impacts could extend beyond the site boundaries. This impact is considered to be potentially significant.

Local Impacts

On the local scale, the project would change traffic on the local street network and within the site's internal roads and parking areas. Carbon monoxide levels along roadways used by project traffic would also be changed. Carbon monoxide is an odorless, colorless poisonous gas whose primary source in the Bay Area is automobiles. Concentrations of this gas are generally highest near intersections of major roads because of the amount of idling, acceleration and deceleration occurring..

The CALINE-4 computer simulation model was applied to eight intersections near the project site. These intersections were selected on the basis of PM peak hour Level of Service. All would operate at Level of Service D or worse for one or more of the traffic scenarios.

The model results were used to predict the maximum 1-and 8-hour concentrations, corresponding to the 1- and 8-hour averaging times specified in the state and federal ambient air quality standards for carbon monoxide. The CALINE-4 model and the assumptions made in its use for this project are described in Attachment 1.

Table 4 shows the results of the CALINE-4 analysis for the peak 1-hour and 8-hour traffic periods in parts per million (PPM). The 1-hour values are to be compared to the federal 1-hour standard of 35 PPM and the state standard of 20 PPM. The 8-hour values in Table 4 are to be compared to the state and federal standard of 9 PPM.

Table 4 shows that existing 1-hour averaged concentrations do exceed the 1-hour ambient standards at two of the eight intersections modeled. Predicted 8-hour averaged concentrations at all eight intersections exceed the state/federal ambient air quality standards.

Future concentrations at study intersections would be influenced by two opposing tends: increasing traffic volumes and declining emission rates from vehicles. By 2002, the assumed build-out year for approved, project and cumulative development, concentrations would be lower than existing concentrations at all intersections. No exceedances of the

Table 4: Predicted Worst-Case Carbon Monoxide Concentrations at Selected Intersections, in Parts Per Million

Intersection	Existing (1997)		Existing + Approved (2002)		Existing + Approved+ Project (2002)		Cumulative (2002)	
	1-Hour	8-Hour	1-Hour	8-Hour	1-Hour	8-Hour	1-Hour	8-Hour
Bascom/ San Carlos	16.7	9.6	12.6	7.1	12.7	7.2	12.8	7.3
Hamilton/ Winchester	21.2	12.8	15.2	9.0	15.2	9.0	15.3	9.0
Monroe/ Stevens Creek	18.1	10.6	14.1	8.2	14.8	8.7	14.9	8.8
Moorpark/ San Tomas	18.2	10.7	13.4	7.7	13.4	7.7	13.5	7.8
Moorpark/ Winchester	18.6	11.0	13.9	8.1	14.0	8.1	14.0	8.1
Winchester/ Stevens Creek	19.2	11.4	14.3	8.3	14.5	8.5	14.6	8.5
Stevens Creek/ Saratoga	17.3	10.0	12.9	7.4	13.0	7.4	13.0	7.4
San Tomas/ Stevens Creek	20.1	12.0	14.7	8.6	14.8	8.7	14.9	8.6

Concentrations exceeding applicable standard are underlined.

1-hour or 8-hour standards are predicted.

The addition of proposed project traffic would increase both 1-hour and 8-hour averaged concentrations. Project traffic would increase 1-hour and 8-hour concentrations by as much as 0.7 PPM. This increase would not create any new exceedances of the 1-hour or 8-hour standards, nor would the project "contribute substantially to an existing or projected violation" of the standards, so project impacts on local carbon monoxide concentrations are considered to be less than significant.

Permanent Regional Impacts

Trips to and from the project would result in air pollutant emissions affecting the entire San Francisco Bay air basin. Regional emissions associated with project vehicle use has been calculated using the URBEMIS-5 computer program. The URBEMIS-5 program and the assumptions made in its use are described in Attachment 2.

The estimated incremental daily emissions associated with new traffic generated by the Town and Country project are shown in Table 5 below for Reactive Organic Gases and Nitrogen Oxides (two precursors of ozone) and PM_{10}. Emissions associated with current use of the site has been similarly calculated.

Guidelines for the evaluation of project impacts issued by the Bay Area Air Quality Management District consider emission increases to be significant if they exceed 80 lbs per day for any regional pollutant.[5] Proposed new project emissions shown in Table 5 would exceed this criterion for all three pollutants, so the proposed project would have a significant effect on regional air quality.

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[5] Bay Area Air Quality Management District, BAAQMD CEQA Guidelines, 1996.

Table 5: Regional Emissions in Pounds Per Day

Source	Reactive Organic Gases	Nitrogen Oxides	PM_{10}
Project Emissions	189.6	237.8	273.0
Emissions from Uses Eliminated	76.1	105.5	128.2
Net Change	113.5	132.3	144.8
BAAQMD Significance Threshold	80.0	80.0	80.0

III. CUMULATIVE IMPACTS

The carbon monoxide modeling conducted for the project and summarized in Table 4 superimposed project traffic on traffic volumes reflecting anticipated cumulative traffic increases. The carbon monoxide analysis indicated that in the future carbon monoxide concentrations can be expected to decline, despite project and cumulative traffic increases. The project, singularly or cumulatively, would not increase the number of violations of the carbon monoxide standards are forecast, nor "contribute substantially to an existing or projected violation".

Project-related regional emissions do exceed the significance thresholds for ozone precursors (NOx) and PM_{10}. BAAQMD guidance states that any proposed project that would individually have a significant air quality impact (based on BAAQMD thresholds of significance) would also be considered to have a significant cumulative air quality impact. Since the project would have a significant regional impact individually, it would also have a significant air quality impact cumulatively.

IV. MITIGATION MEASURES

Construction Impacts

The severity of construction impacts can be reduced to a level that is less-than-significant through application of mitigation measures.

Conditions of approval should include the following requirements for demolition activities:

- Whenever possible, dust-proof chutes should be used for loading construction debris onto trucks.
- Watering should be used to control dust generation during demolition of structures and break-up of pavement.
- All trucks removing debris from the site should be covered.
- Internal haul roads should be paved, sealed or stabilized to control dust from truck traffic. Paved haul roads should be regularly swept or cleaned to remove accumulated dust.
- The recycling of demolition materials should be considered, as it would reduce the number of truck trips to the site during construction. It is possible that materials from the demolition of the shopping center buildings and pavement could be recycled after being crushed on site. The use of a crusher on the site would be subject to regulation by the Bay Area Air Quality Management District.

The Bay Area Air Quality Management District considers the following feasible control measures appropriate for large construction sites:

- Water all active construction areas at least twice daily.
- Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites.
- Sweep daily (with water sweepers) all paved access roads, parking areas and staging areas at construction sites.
- Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets.
- Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more.
- Enclose, cover, water twice daily or apply (non-toxic) soil binders to exposed stockpiles (dirt, sand, etc.)
- Limit traffic speeds on unpaved roads 15 mph.
- Install sandbags or other erosion control measures to prevent silt runoff to public roadways.
- Replant vegetation in disturbed areas as quickly as possible.

The above measures should be required by all construction contracts for the proposed project.

Regional Air Quality Impacts

The project is a mixed-use development placing residential and retail uses in close proximity. This characteristic provides for much higher internal and non-auto travel mode percentages compared to typical suburban residential or commercial development. The air quality analysis was based upon trip generation figures reflecting this characteristic.

The potential for reducing vehicle trips through Transportation Systems Management programs (e.g., carpool/vanpool matching, transit incentives/driving disincentives) is very limited since these programs target employees at the place of work, and very few of the project trips are employee trips.

The following are measures that can be implemented to further promote non-auto travel to the project site:

- Provision of secure and convenient residential and non-residential bicycle parking.
- Preferential parking for low emission vehicles and carpools within parking garages.
- Construct transit facilities such as bus turnouts, benches, shelters and information kiosks.
- Charge rent for residential parking spaces as opposed to including parking space costs in residential rental rates. This would provide a subsidy for residents who do not own cars.

The above mitigation measures would be expected to reduce project trip generation by 1-5%. Since a reduction in trips of 42% would be necessary to reduce project regional and cumulative regional impacts to a level that is not significant, project impacts would remain significant and are considered unavoidable.

ATTACHMENT 1: CALINE-4 MODELING

The CALINE-4 model is a fourth-generation line source air quality model that is based on the Gaussian diffusion equation and employs a mixing zone concept to characterize pollutant dispersion over the roadway.[1] Given source strength, meteorology, site geometry and site characteristics, the model predicts pollutant concentrations for receptors located within 150 meters of the roadway. The CALINE-4 model allows roadways to be broken into multiple links that can vary in traffic volume, emission rates, height, width, etc..

The intersection mode of the model was employed, which distributes emissions along each leg of the intersection for free-flow traffic, idling traffic and accelerating and decelerating traffic. The intersection model extended 500 meters in all directions. Receptors (locations where the model calculates concentrations) were located at distance of 20 feet from the roadway edge for all four corners of the intersection and at locations 50 feet in either direction, for a total of 12 receptors. Figure 1 is a schematic diagram showing the location of receptors.

The worst case mode of the CALINE-4 model was employed. In this mode the wind direction is varied to determine which wind direction results in the highest concentration for each receptor. Emission factors were derived from the California Air Resources Board EMFAC-7F model. Adjustments were made for vehicle mix and hot start/ cold start/ hot stabilized percentages appropriate to each roadway. Temperature was assumed to be 50 degrees F.

The computation of carbon monoxide levels assumed the following worst-case

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[1] California Department of Transportation, CALINE-4- A Dispersion Model for Predicting Air Pollutant Concentrations Near Roadways, Report No. FHWA/CA/TL-84-15, 1984.

ATTACHMENT 2: URBEMIS-5

Estimates of regional emissions generated by project traffic were made using a program called URBEMIS-5.[2] URBEMIS-5 is a program which estimate the emissions that result from various land use development projects. Land use project can include residential uses such as single-family dwelling units, apartments and condominiums, and nonresidential uses such as shopping centers, office buildings, and industrial parks. URBEMIS-5 contains default values for much of the information needed to calculate emissions. However, project-specific, user-supplied information can also be used when it is available.

Inputs to the URBEMIS-5 program include trip generation rates, vehicle mix, average trip length by trip type and average speed. Trip generation rates for project land uses were provided by the project transportation consultant. Average trip lengths and vehicle mixes for the Bay Area were used. Average speed for all types of trips was assumed to be 30 MPH.

The URBEMIS-5 runs assumed summertime conditions with an ambient temperature of 75 degrees F.

The URBEMIS-5 program provides emission rates for Total Organic Gases (TOG). The TOG emission was multiplied by 0.92 to estimate Reactive Organic Gases (ROG).

PM-10 emissions from road dust are not calculated by the URBEMIS-5 program. Daily Vehicle Miles Travelled (VMT) generated by project traffic was multiplied by a road dust emission factor[3] of 0.69 grams per mile, and this emission was added to the URBEMIS-5 meteorological conditions:

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[2] California Air Resources Board, URBEMIS-5 Computer Program Version 5.0 User Guide, July 1995.

[3] Bay Area Air Quality Management District, BAAQMD CEQA Guidelines, 1996.

Windspeed: 1 mps
Stability: F Category
Mixing Height: 1000 meters
Surface Roughness: 100 cm
Standard Deviation of Wind Direction: 10 degrees

The CALINE-4 model calculates the local contribution of nearby roads to the total concentration. The other contribution is the background level attributed to more distant traffic. The assumed 1-hour background level was 10.1 P.M. in 1997 and 8.4 PPM in 2002. The assumed 8-hour background level was 5.0 PPM in 1997 and 4.2 PPM in 2002. These background concentrations were developed using carbon monoxide background levels and correction factors for future years prepared by the BAAQMD. To generate estimates of 8-hour concentrations from the 1-hour CALINE results a persistence factor of 0.70 was employed.

APPENDIX C

NOISE STUDY

TOWN AND COUNTRY MASTER PLAN EIR
SAN JOSE, CALIFORNIA
ENVIRONMENTAL NOISE ASSESSMENT

November 7, 1997

◆ ◆ ◆

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97-036

SETTING

a. Fundamentals of Environmental Noise

Noise may be defined as unwanted sound. Noise is usually objectionable because it is disturbing or annoying. The objectionable nature of sound could be caused by its *pitch* or its loudness. *Pitch* is the height or depth of a tone or sound, depending on the relative rapidity (frequency) of the vibrations by which it is produced. Higher pitched signals sound louder to humans than sounds with a lower pitch. *Loudness* is intensity of sound waves combined with the reception characteristics of the ear. Intensity may be compared with the height of an ocean wave in that it is a measure of the amplitude of the sound wave.

In addition to the concepts of pitch and loudness, there are several noise measurement scales which are used to describe noise in a particular location. *A decibel (dB)* is a unit of measurement which indicates the relative amplitude of a sound. The zero on the decibel scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Sound levels in decibels are calculated on a logarithmic basis. An increase of 10 decibels represents a ten-fold increase in acoustic energy, while 20 decibels is 100 times more intense, 30 decibels is 1,000 times more intense, etc. There is a relationship between the subjective noisiness or loudness of a sound and its intensity. Each 10 decibel increase in sound level is perceived as approximately a doubling of loudness over a fairly wide range of intensities. Technical terms are defined in Table 1.

There are several methods of characterizing sound. The most common in California is the *A-weighted sound level or dBA*. This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Representative outdoor and indoor noise levels in units of dBA are shown in Table 2. Because sound levels can vary markedly over a short period of time, a method for describing either the average character of the sound or the statistical behavior of the variations must be utilized. Most commonly, environmental sounds are described in terms of an average level that has the same acoustical energy as the summation of all the time-varying events. This energy-equivalent sound/noise descriptor is called L_{eq}. The most common averaging period is hourly, but L_{eq} can describe any series of noise events of arbitrary duration.

TERM	DEFINITIONS
Decibel, dB	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micropascals (20 micronewtons per square meter).
Frequency, Hz	The number of complete pressure fluctuations per second above and below atmospheric pressure.
A-Weighted Sound Level, dBA	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise. All sound levels in this report are A-weighted, unless reported otherwise.
L_{01}, L_{10}, L_{50}, L_{90}	The A-weighted noise levels that are exceeded 1%, 10%, 50%, and 90% of the time during the measurement period.
Equivalent Noise Level, L_{eq}	The average A-weighted noise level during the measurement period.
Community Noise Equivalent Level, CNEL	The average A-weighted noise level during a 24-hour day, obtained after addition of 5 decibels in the evening from 7:00 pm to 10:00 pm and after addition of 10 decibels to sound levels measured in the night between 10:00 pm and 7:00 am.
Day/Night Noise Level, L_{dn}	The average A-weighted noise level during a 24-hour day, obtained after addition of 10 decibels to levels measured in the night between 10:00 pm and 7:00 am.
L_{max}, L_{min}	The maximum and minimum A-weighted noise level during the measurement period.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Intrusive	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.

DEFINITIONS OF ACOUSTICAL TERMS **TABLE 1**

At a Given Distance From Noise Source	A-Weighted Sound Level in Decibels	Noise Environments	Subjective Impression
	140		
Civil Defense Siren (100')	130		
Jet Takeoff (200')	120		Pain Threshold
	110	Rock Music Concert	
Diesel Pile Driver (100')	100		Very Loud
Freight Cars (50')	90	Boiler Room Printing Press Plant	
Pneumatic Drill (50') Freeway (100')	80		
Vacuum Cleaner (10')	70	In Kitchen With Garbage Disposal Running	Moderately Loud
	60	Data Processing Center	
Light Traffic (100') Large Transformer (200')	50	Department Store	
	40	Private Business Office	Quiet
Soft Whisper (5')	30	Quiet Bedroom	
	20	Recording Studio	
	10		Threshold of Hearing
	0		

TYPICAL SOUND LEVELS MEASURED IN THE ENVIRONMENT AND INDUSTRY

TABLE 2

ILLINGWORTH & RODKIN, INC./Acoustical Engineers

The scientific instrument used to measure noise is the sound level meter. Sound level meters can accurately measure environmental noise levels to within about plus or minus 1 dBA. Various computer models are used to predict environmental noise levels from sources, such as roadways and airports. The accuracy of the predicted models depends upon the distance the receptor is from the noise source. Close to the noise source, the models are accurate to within about plus or minus 1 to 2 dBA.

Since the sensitivity to noise increases during the evening and at night -- because excessive noise interferes with the ability to sleep -- 24-hour descriptors have been developed that incorporate artificial noise penalties added to quiet-time noise events. The *Community Noise Equivalent Level, CNEL*, is a measure of the cumulative noise exposure in a community, with a 5 dB penalty added to evening (7:00 pm - 10:00 pm) and a 10 dB addition to nocturnal (10:00 pm - 7:00 am) noise levels. The *Day/Night Average Sound Level,* L_{dn}, is essentially the same as CNEL, with the exception that the evening time period is dropped and all occurrences during this three-hour period are grouped into the daytime period.

Effects of Noise

Hearing Loss

While physical damage to the ear from an intense noise impulse is rare, a degradation of auditory acuity can occur even within a community noise environment. Hearing loss occurs mainly due to chronic exposure to excessive noise, but may be due to a single event such as an explosion. Natural hearing loss associated with aging may also be accelerated from chronic exposure to loud noise.

The Occupational Safety and Health Administration (OSHA) has a noise exposure standard which is set at the noise threshold where hearing loss may occur from long-term exposures. The maximum allowable level is 90 dBA averaged over eight hours. If the noise is above 90 dBA, the allowable exposure time is correspondingly shorter.

Sleep and Speech Interference

The thresholds for speech interference indoors are about 45 dBA if the noise is steady and above 55 dBA if the noise is fluctuating. Outdoors the thresholds are about 15 dBA higher. Steady noise of sufficient intensity (above 35 dBA) and fluctuating noise levels above about

Regulatory Background

Federal and State

There are no Federal or State regulations directly applicable to the proposed project. The California Environmental Quality Act (CEQA) includes qualitative guidelines for determining the significance of adverse environmental noise impacts. According to CEQA, a substantial increase in noise at a sensitive location, such as a residence or a school, resulting from a project is considered to cause a significant adverse impact (Appendix G[p] of the CEQA Guidelines document).

City of San Jose

The City of San Jose has adopted a Noise Element as part of its 2020 General Plan. The Noise Element sets forth specific Goals and Policies for compatible noise and land use planning. It is the goal of the City of San Jose to minimize the impact of noise on people through reduction and suppression techniques and through appropriate land use policies. These policies that pertain to this project include the following:

Policy 1.	The City's acceptable noise level objectives are 55-L_{dn} as the long-range exterior noise quality level, 60-L_{dn} as the short-range exterior noise quality level, 45-L_{dn} as the interior noise quality level, and 76-L_{dn} as the maximum exterior noise level necessary to avoid significant adverse health effects. The City recognizes that because of existing noise levels and the need for State and Federal noise legislation, a short-term outdoor standard of 60-L_{dn} is considered to be more realistic than 55-L_{dn}.
Policy 8.	The City should discourage the use of outdoor appliances, air conditioners and other consumer products which generate noise levels in excess of the City's exterior noise standards.
Policy 9.	Construction operations should use available noise suppression devices and techniques.
Policy 10.	Commercial drive-through uses should only be allowed when consistent with the City's exterior noise level standards and compatibility with adjacent land uses can be demonstrated.

45 dBA have been shown to affect sleep. Interior residential standards for multi-family dwellings are set by the State of California at 45 dBA L_{dn}. Typically, the highest steady traffic noise level during the daytime is about equal to the L_{dn} and nighttime levels are 10 dBA lower. The standard is designed for sleep and speech protection and most jurisdictions apply the same criterion for all residential uses. Typical structural attenuation is 12-17 dBA with open windows. With closed windows in good condition, the noise attenuation factor is around 20 dBA for an older structure and 25 dBA for a newer dwelling. Sleep and speech interference is therefore possible when exterior noise levels are about 57-62 dBA L_{dn} with open windows and 65-70 dBA L_{dn} if the windows are closed. Levels of 55-60 dBA are common along collector streets and secondary arterials, while 65-70 dBA is a typical value for a primary/major arterial. Levels of 75-80 dBA are normal noise levels at the first row of development outside a freeway right-of-way. In order to achieve an acceptable interior noise environment, bedrooms facing secondary roadways need to be able to have their windows closed, those facing major roadways and freeways typically need special glass windows.

Annoyance

Attitude surveys are used for measuring the annoyance felt in a community for noises intruding into homes or affecting outdoor activity areas. In these surveys, it was determined that the causes for annoyance include interference with speech, radio and television, house vibrations, and interference with sleep and rest. The L_{dn} as a measure of noise has been found to provide a valid correlation of noise level and the percentage of people annoyed. People have been asked to judge the annoyance caused by aircraft noise and ground transportation noise. There continues to be disagreement about the relative annoyance of these different sources. When measuring the percentage of the population highly annoyed, the threshold for ground vehicle noise is about 55 dBA L_{dn}. At an L_{dn} of about 60 dBA, approximately 2 percent of the population is highly annoyed. When the L_{dn} increases to 70 dBA, the percentage of the population highly annoyed increases to about 12 percent of the population. There is, therefore, an increase of about 1 percent per dBA between an L_{dn} of 60-70 dBA. Between an L_{dn} of 70-80 dBA, each decibel increase increases by about 2 percent the percentage of the population highly annoyed. People appear to respond more adversely to aircraft noise. When the L_{dn} is 60 dBA, approximately 10 percent of the population is believed to be highly annoyed. Each decibel increase to 70 dBA adds about 2 percentage points to the number of people highly annoyed. Above 70 dBA, each decibel increase results in about a 3 percent increase in the percentage of the population highly annoyed.

Policy 11. When located adjacent to existing or planned noise sensitive residential land public/quasi-public land uses, non-residential land uses should mitigate noise generation to meet the 55 dBA L_{dn} guideline at the property line.

The noise and land use compatibility guidelines adopted by the City of San Jose are shown in Figure 1. The City recognizes that because of the existing noise levels in San Jose, a short-term outdoor standard of 60 L_{dn} is considered to be more realistic than 55 L_{dn} for the assessment of ground transportation noise.

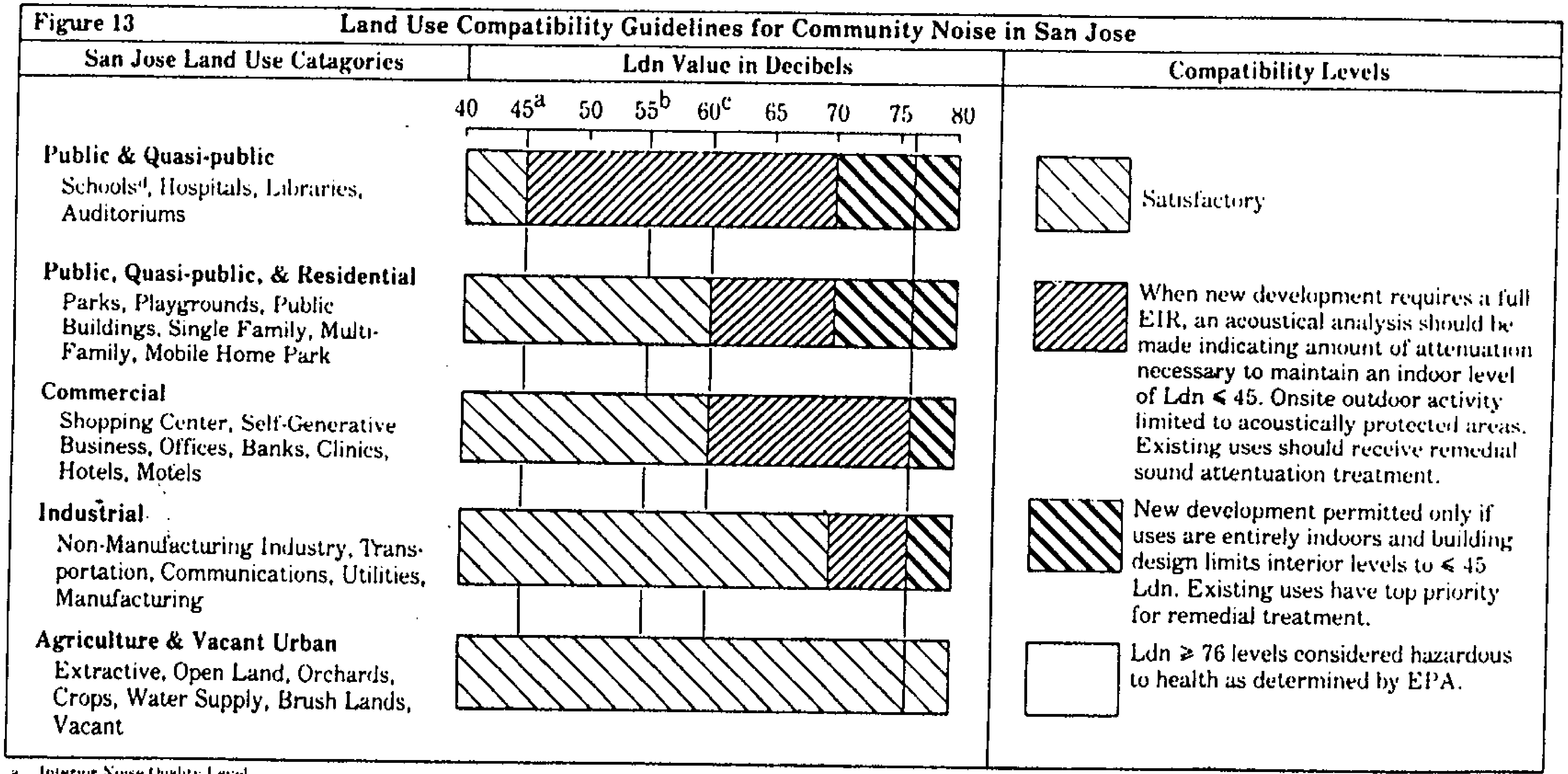
State of California

Title 24, Part 2 of the State Building Code contains uniform minimum noise insulation performance standards to protect persons within new hotels, motels, dormitories, long-term care facilities, apartment houses, and dwellings other than detached single-family dwellings from the effects of excessive noise. The State Code mandates that noise levels inside multi-family residential structures proposed to be located where exterior noise levels exceed 60 dB must not exceed 45 dB. The noise metric shall be either the day/night average sound level (L_{dn}) or the Community Noise Equivalent Level (CNEL), consistent with the noise element of the local general plan. In assessing the noise environment against the State Code, worst case noise levels, either existing or future, should be used as the basis for determining compliance. Future noise levels should be predicted for a minimum period of ten years from the time of building permit application. Evidence of compliance should consist of submittal of an acoustical analysis report, prepared under the supervision of a person experienced in the field of acoustical engineering, with the application for a building permit. If interior allowable noise levels are met by requiring that windows be unopenable or closed, the design of the structure must also specify ventilation or air conditioning systems to provide a habitable interior environment.

Existing Noise Environment

The project site is shown in Figure 2. The portion of the site west of Redwood Avenue contains the currently developed Town and Country Shopping Center. Land uses in the vicinity of the site are residential, office, retail, and commercial. Existing residences are located along Redwood Avenue, Hemlock Avenue, and Monroe Avenue.

Figure 13 Land Use Compatibility Guidelines for Community Noise in San Jose



▧ Satisfactory

▨ When new development requires a full EIR, an acoustical analysis should be made indicating amount of attenuation necessary to maintain an indoor level of Ldn ≤ 45. Onsite outdoor activity limited to acoustically protected areas. Existing uses should receive remedial sound attentuation treatment.

▧ New development permitted only if uses are entirely indoors and building design limits interior levels to ≤ 45 Ldn. Existing uses have top priority for remedial treatment.

☐ Ldn ≥ 76 levels considered hazardous to health as determined by EPA.

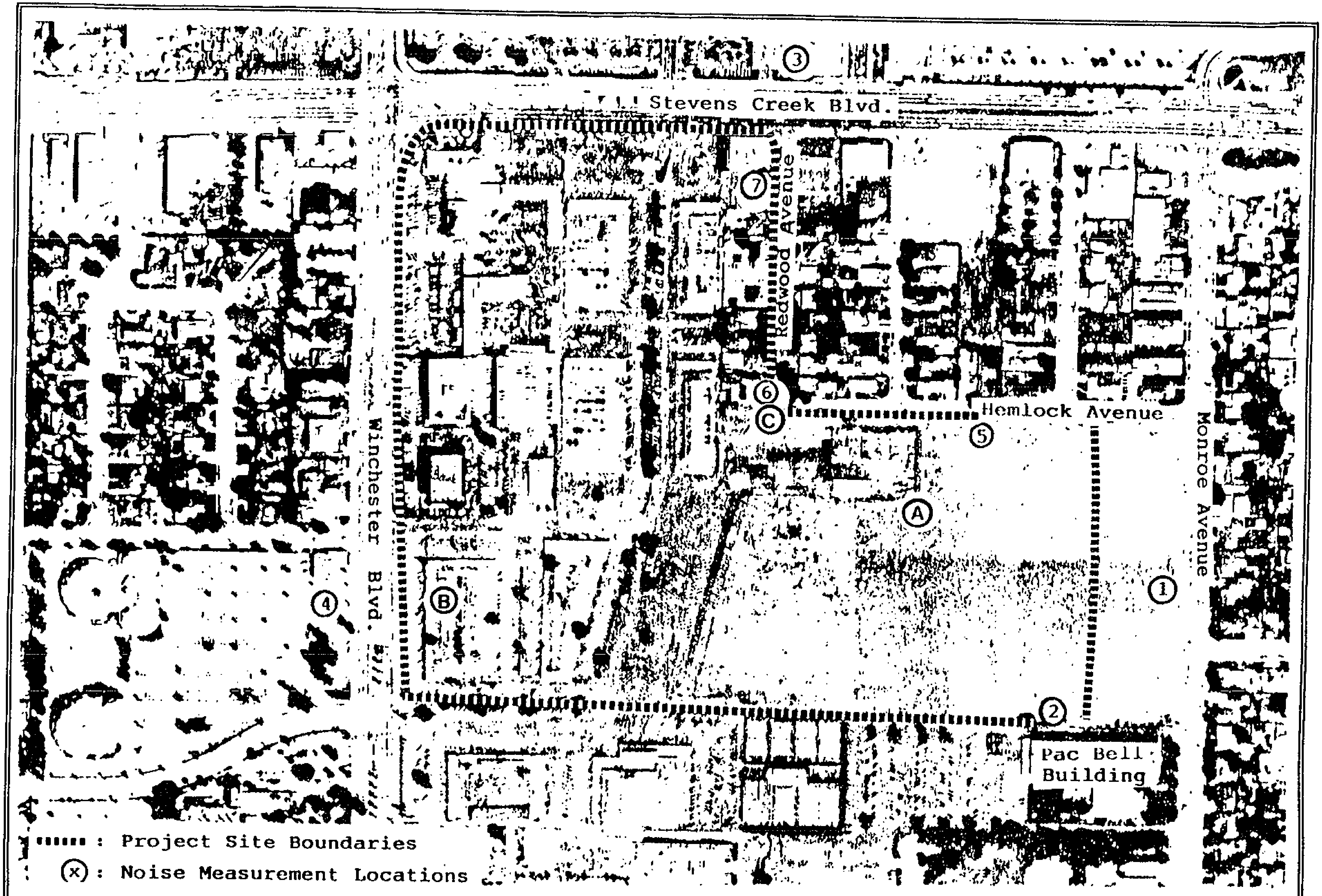
a. Interior Noise Quality Level
b. Long-Range Exterior Noise Quality Level
c. Short-Range Exterior Noise Quality Level
d. Leq value of $L_{eq(3)}$ = is used for the evaluation of school impact by the airport

Source: Horizon 2000 General Plan, City of San Jose

97-036

NOISE AND LAND USE COMPATIBILITY GUIDELINES

FIGURE 1



NOISE MONITORING LOCATIONS

FIGURE 2

ILLINGWORTH & RODKIN, INC./Acoustics • Air Quality

Noise levels in and around the site were monitored during site visits on January 16 and 17, 1992, and July 9 and 10, 1997. The 1992 noise survey consisted of one daily (Location A) and seven 15-minute (Locations 1-7) measurements. The 1997 survey added two daily measurements (Locations B and C). The measurement locations are shown in Figure 2. The site is currently exposed to noise from traffic on the local street network, distant traffic on Interstate 280 and 880, and aircraft overflights from the San Jose International Airport. The noise measurements were taken with Larson-Davis Laboratories Model 700 integrating sound level meters equipped with Bruel & Kjaer 4176 condenser microphones. All meters were calibrated before and after the measurements.

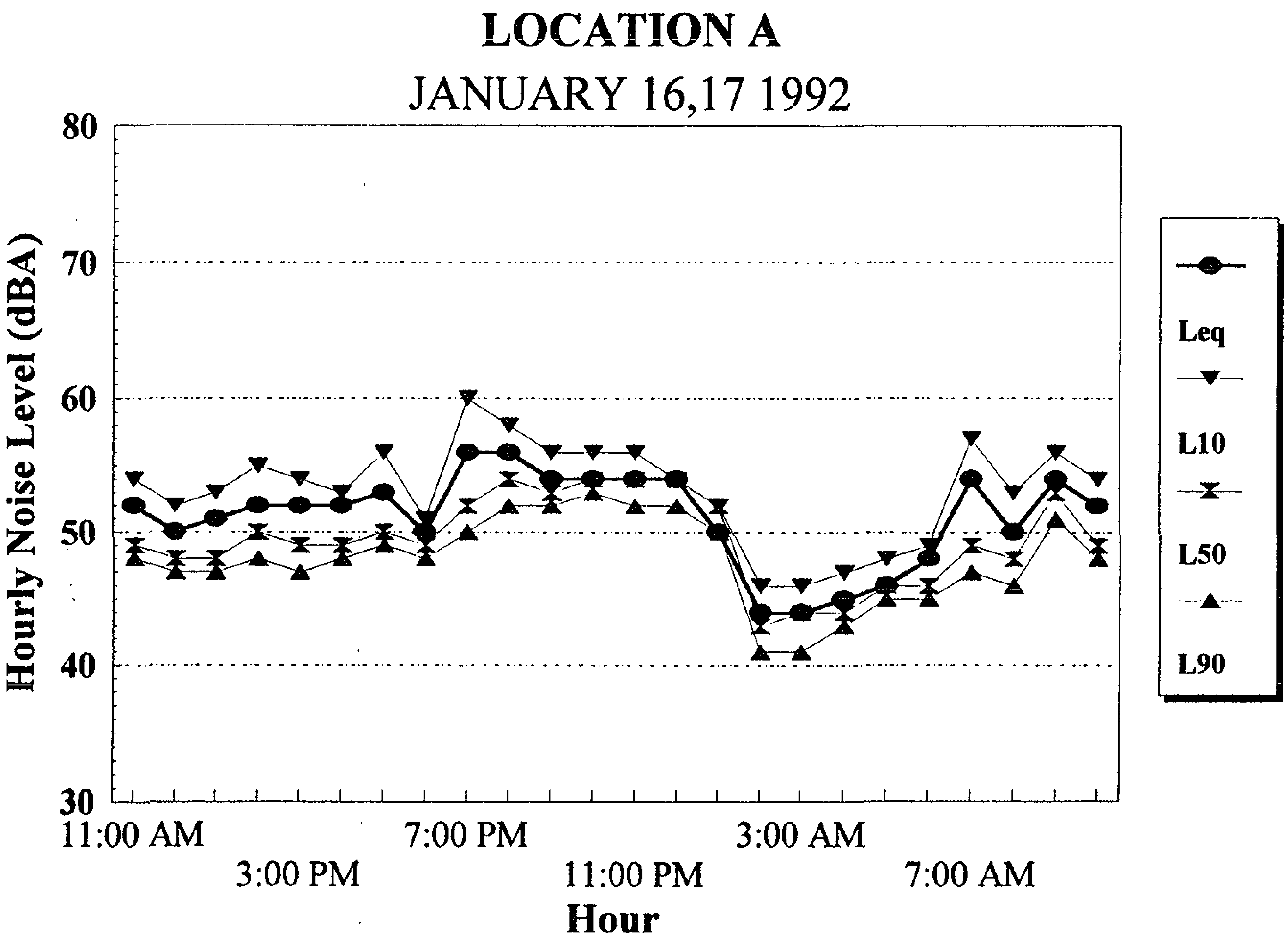
1992 Noise Survey

Location A was on the site, approximately 220 feet from Hemlock Avenue and at a significant setback from Monroe Avenue. Noise data collected at this location are shown in Figure 3. The L_{dn} was 58 dBA. The noise of distant traffic on Stevens Creek Boulevard, Winchester Boulevard, and nearby freeways were most significant. Traffic on Monroe Avenue and Hemlock Avenue did not significantly influence noise levels. Aircraft overflights generated the highest noise levels, ranging between 60 and 74 dBA. Although aircraft overflights were the loudest single events recorded at this location, such events were rather infrequent and did not affect the L_{dn} noise level significantly.

Table 3 summarizes the results of the short-term measurements. The table shows the average noise level (L_{eq}) for each measurement and also an estimate of the 24-hour average noise level (L_{dn}). The use of existing traffic data for streets surrounding the site and noise data collected at the long-term monitor were used to estimate the L_{dn} noise level at each satellite location.

Location 1 was 50 feet from the centerline of Monroe Avenue. Noise levels were dominated by traffic on Monroe Avenue. Distant freeway traffic was audible but not significant. The L_{dn} is estimated to be 64 dBA. Existing residences fronting Monroe Avenue are exposed to noise levels measured at this location.

Location 2 was at the southern property boundary, 330 feet from Monroe Avenue. A Pacific Bell office building adjoins the site to the south. Noise levels at this location were influenced by traffic on Monroe Avenue, occasional aircraft overflights, some distant freeway traffic, and equipment noise from the mechanical room on the Pacific Bell property.


LOCATION A
JANUARY 16,17 1992

NOISE LEVELS MEASURED NEAR MONROE AVE. RESIDENCE

FIGURE 3

ILLINGWORTH & RODKIN, INC./Acoustics • Air Quality

Location	Description	Date	Time Starting	L_{eq}[1]	Estimated L_{dn}[2]	Comments
1	50 ft. from the center of Monroe Ave.; typical existing residence setback.	1/16/92 1/17/92	10:30 am 4:30 pm	59 62	64	Mostly noise from traffic on Monroe Ave.; I-280 traffic noise at 50-52 dBA; I-880 traffic not audible; occasional jet aircraft at 55-68 dBA.
2	330 ft. from Monroe Ave.; at property line with Pacific Bell.	1/16/92 1/17/92	11:00 am 4:00 pm	54 58	58-60	Mostly noise from traffic on Monroe Ave.; mechanical room noise from Pac Bell bldg. at 49-51 dBA; occasional jet aircraft at 54-70 dBA.
3	70 ft. from the center of Stevens Creek Blvd.; on the Valley Fair Mall shopping center; typical office bldg. setback.	1/16/92 1/17/92	11:30 am 3:15 pm	66 71	70-71	Traffic on Stevens Creek Blvd. is the only significant noise source.
4	80 ft. from the center of Winchester Blvd.; typical bldg. setback.	1/16/92	12:00 pm	65	68-69	Traffic on Winchester Blvd. is the dominant noise source.
5	30 ft. to Hemlock Ave.; typical residence and/or office bldg. setback.	1/16/92	12:45 pm 3:45 pm	58 56	56-58	Mostly noise from traffic on Hemlock Ave.; Stevens Creek Blvd. traffic noise at 46-50 dBA; I-280 traffic noise at 48-50 dBA; occasional jet aircraft at 54-70 dBA.
6	Corner of Hemlock with Redwood; 40 ft. from the center of Redwood Ave.; typical house setback.	1/17/92	2:15 pm	55	55-58	Mostly traffic noise on Redwood and Hemlock Ave.; Stevens Creek Blvd. traffic noise at 45-58 dBA; I-280 traffic noise at 45-49 dBA.
7	25 ft. from the center of Redwood Ave.; 150 ft. south of Stevens Creek Blvd.; typical homes/offices setback.	1/17/92	2:45 pm	59	63-65	Mostly traffic noise on Stevens Creek Blvd.; some noise from local traffic on Redwood Ave.

[1] L_{eq} -- The average A-weighted noise level during the measurement period.

[2] **L_{dn} (Day/Night Sound Level)** -- A descriptor established by the U.S. Environmental Protection Agency (EPA) for the 24-hour average A-weighted noise level.

Sound levels during the hours from 10:00 pm to 7:00 am are penalized 10 dB to account for the increased sensitivity of people during the nighttime hours.

15-MINUTE NOISE MEASUREMENTS

TABLE 3

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These noise sources contributed approximately equally towards an L_{dn} estimated between 58 and 60 dB.

The mechanical room for Pacific Bell is located approximately 40 feet from the property line. Based on a brief measurement taken at the nearest point of the common property line to the mechanical room the equipment generates a steady noise level of 56 to 57 dBA. Assuming that the equipment runs continuously, the L_{dn} noise level at this nearest point on the common property line would be 63 dBA.

Location 3 was 70 feet from the centerline of Stevens Creek Boulevard. Stevens Creek Boulevard traffic was the dominant noise source at this location. The L_{dn} is estimated to be 72 dBA. Existing office and commercial buildings adjacent to Stevens Creek Boulevard are exposed to similar noise levels.

Location 4 was 80 feet from the center of Winchester Boulevard, the typical setback of existing office buildings, restaurants, and retail establishments. The L_{dn} is estimated to be 68 to 69 dBA. Traffic on Winchester Boulevard was the dominant noise source during the measurements.

Location 5 was 30 feet from Hemlock Avenue, the typical setback of several residences and office buildings. Noise levels were influenced by occasional car passbys on Hemlock Avenue and steady background noise generated by distant traffic on Stevens Creek Boulevard and the freeways. The L_{dn} is estimated to be 56 to 58 dBA.

Location 6 was at the corner of Hemlock Avenue and Redwood Avenue, 30 feet from the road. Several residences are present in the area. The noise environment was dominated by traffic on the local street network and distant traffic on Stevens Creek Boulevard and the freeways. The L_{dn} is estimated to be 55 to 58 dBA.

Location 7 was 25 feet from the center of Redwood Avenue, approximately 150 feet south of Stevens Creek Boulevard. Residences and businesses front Redwood Avenue near this measurement location. The noise environment was dominated by traffic on Stevens Creek Boulevard. Noise from traffic on Redwood Avenue was not significant. The L_{dn} is estimated to be 63 to 65 dBA.

1997 Noise Survey

Location B was about 90 feet from the centerline of Winchester Boulevard at a location on the project site proposed for residential development. The results of noise measurements at Location B are shown in Figure 4. The L_{dn} is estimated to be 67 dBA. Traffic on Winchester Boulevard was the only significant noise source known to affect the measurements. These data confirm the previous short-term measurements from 1992.

Location C was at the intersection of Redwood Avenue and Hemlock Avenue (Location 6 from the 1992 survey). Traffic on Redwood/Hemlock and distant traffic on Stevens Creek Boulevard were the dominant noise sources at this location. The results of the noise measurements are shown on Figure 5. The hourly data during the daytime correlates very well with the results from the 1992 survey. The measured L_{dn} is estimated to be 60 dBA.

IMPACTS AND MEASURES TO REDUCE IMPACTS

The proposed project is a mixed-use shopping center, hotel, and multi-family housing development. The project is divided into six sections (Figure 6).

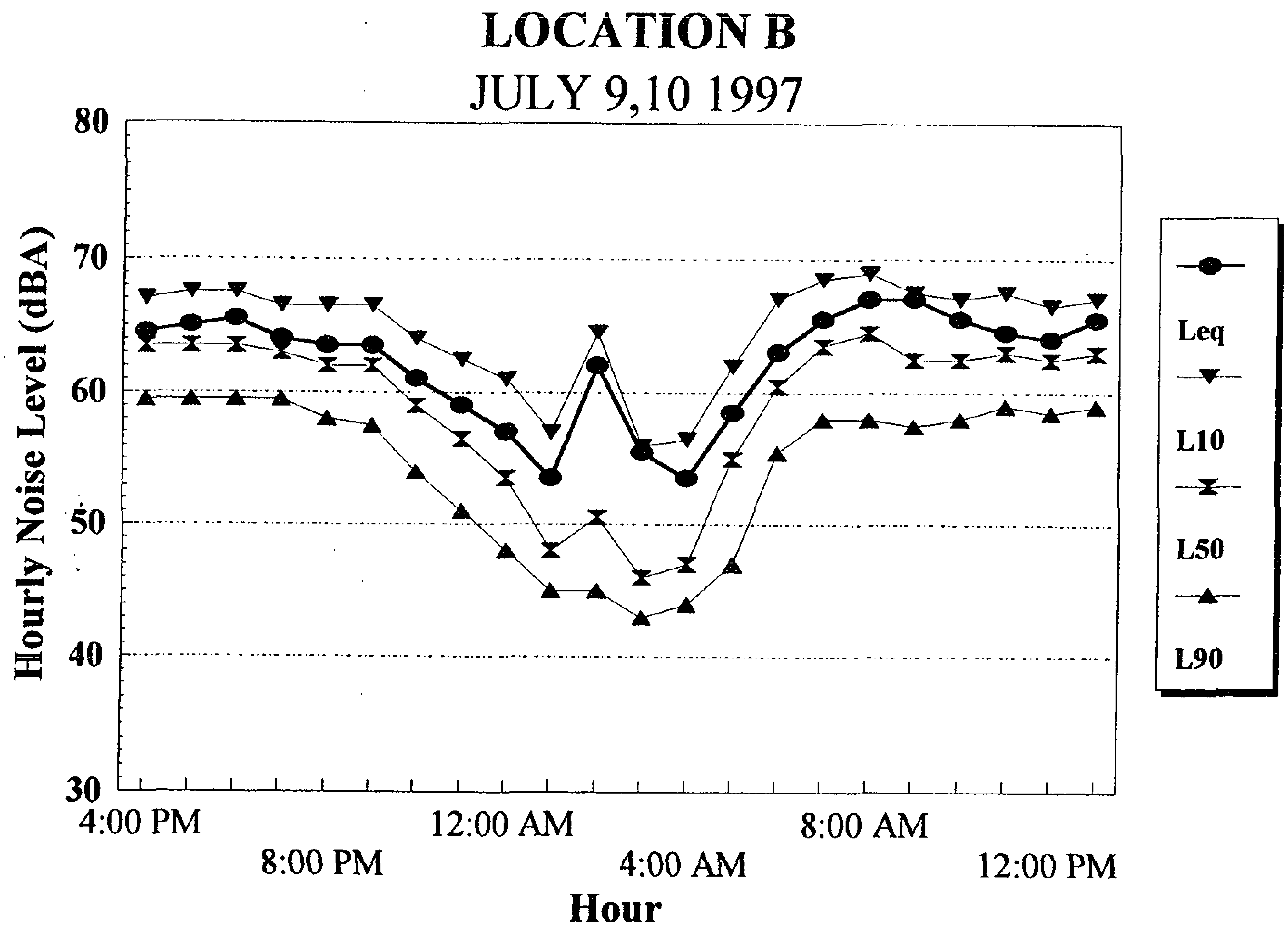
Potential noise issues associated with this development consist of the following:

(1) The compatibility of the proposed land uses with the noise environment on the site;
(2) The extent to which project-generated noise would adversely impact existing residences and businesses in the area; and
(3) The effect of construction noise during development of the site.

Traffic data, used to assess ground transportation noise, was supplied by the transportation consultant (Barton-Aschman Associates). The site's exposure to aircraft noise was based on information contained in the San Jose International Airport Environs Plan.

Significance Criteria

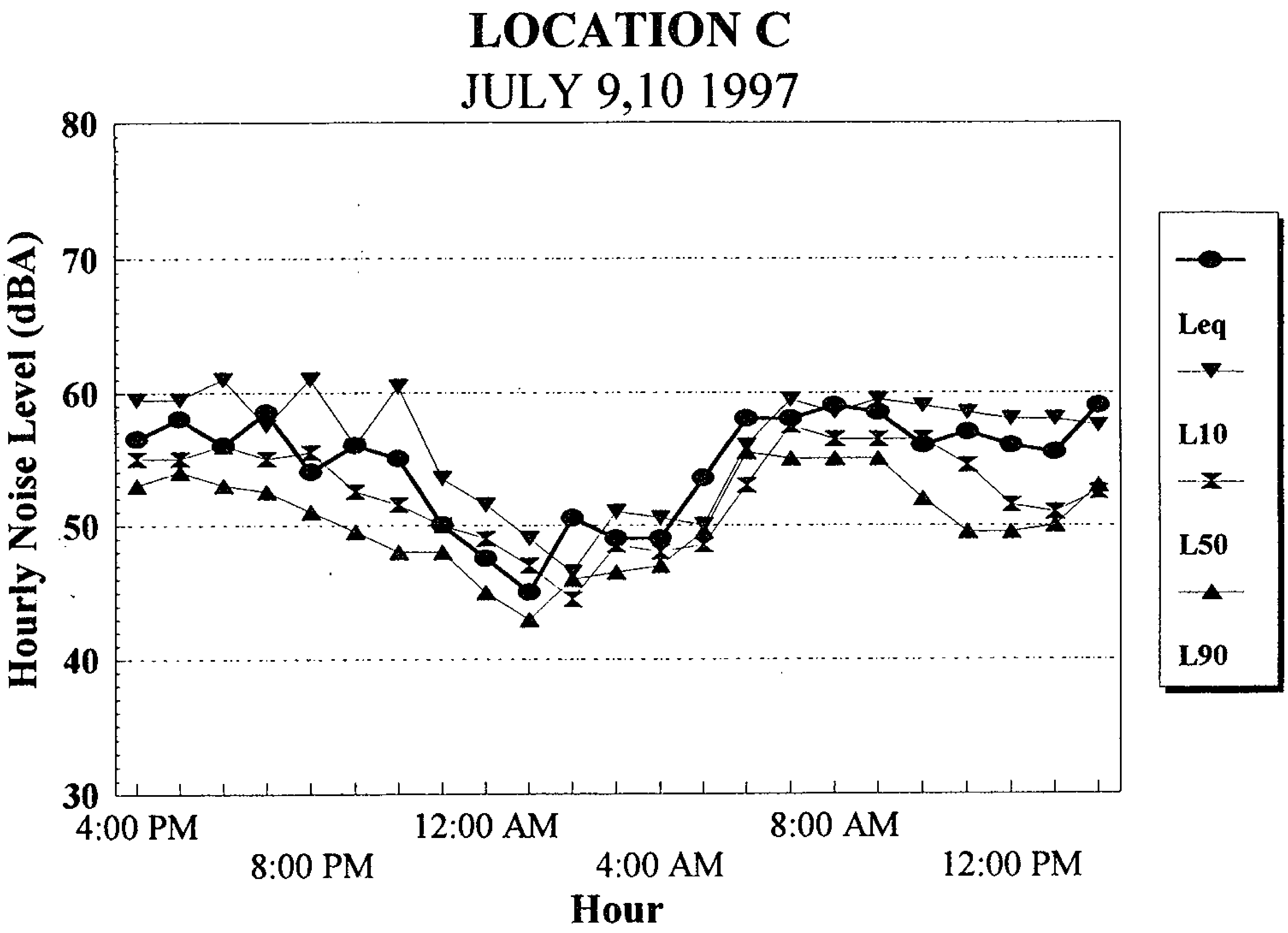
The City of San Jose's Goals and Policies contained in the San Jose 2020 General Plan, as amended in 1996 (General Plan Annual Review Report, 1996 Annual Review) are used to assess the significance of noise impacts associated with this project. The project impacts would be considered significant if:



NOISE LEVELS MEASURED ON WINCHESTER BLVD.

FIGURE 4

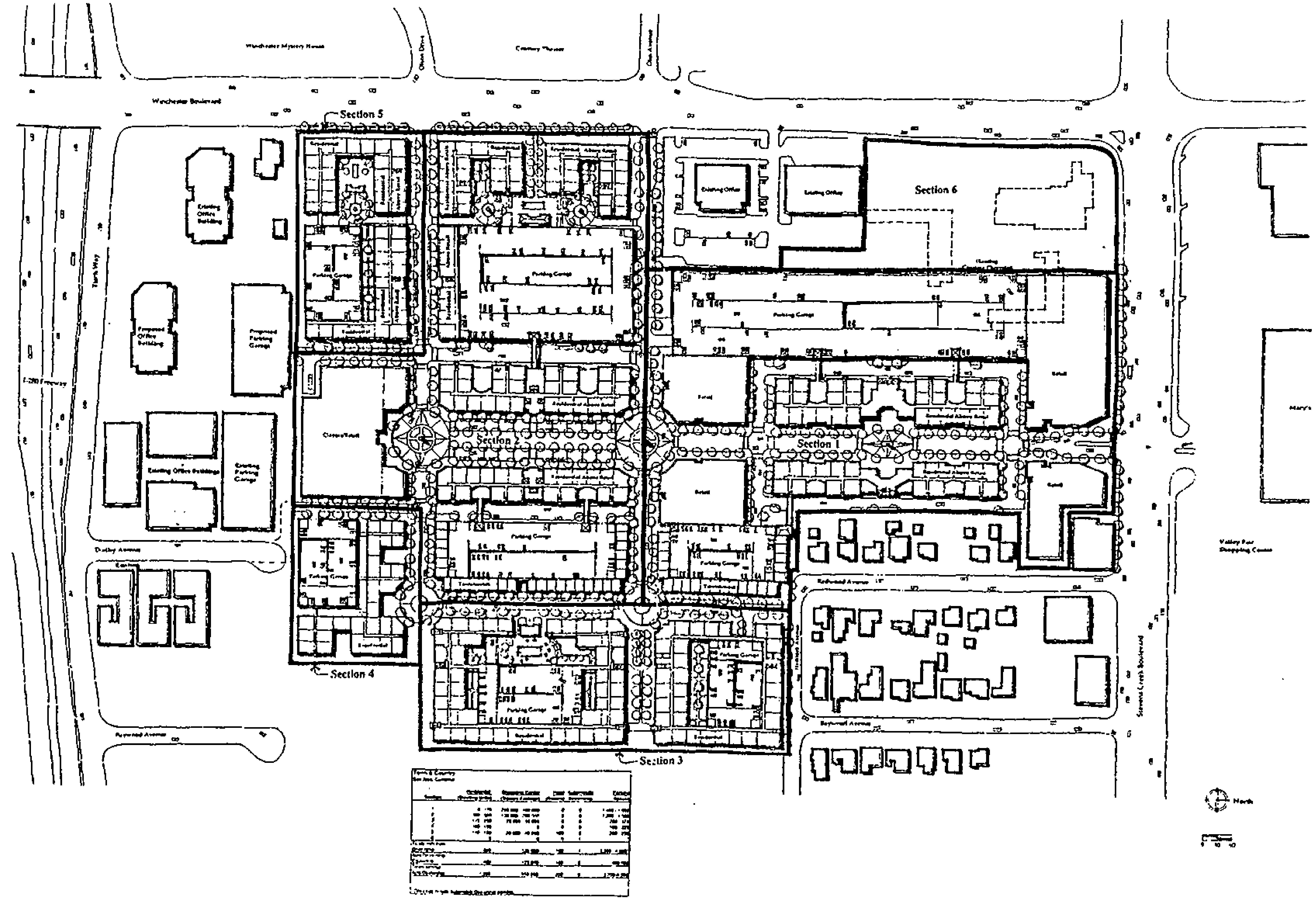
ILLINGWORTH & RODKIN, INC./Acoustics • Air Quality



NOISE LEVELS MEASURED ON HEMLOCK AVE.

FIGURE 5

97-036



DEVELOPMENT PLAN

FIGURE 6

ILLINGWORTH & RODKIN, INC./Acoustics • Air Quality

- they raised existing (ambient) noise levels, from below to above the applicable criteria;
- noise resulting from the project increased average ambient noise levels, which are already above the applicable criteria, by more than 3 dBA; or
- noise generated by the project resulted in a 5 dBA increase and the resulting level remained below the normally acceptable limit. These limits are in terms of changes in the L_{dn}.

These criteria for significance recognize the following:

- The threshold levels of acceptability established by the City of San Jose;
- That once the threshold level has been exceeded, any noticeable change above that level (a dBA increase) results in a further degradation of the noise environment; and
- A clearly noticeable change (a 5 dBA increase) in the noise environment, even though the threshold level has not been reached, results in a significant impact because people respond adversely to such a change regardless of the absolute level of the noise.

Noise of demolition and construction is assessed somewhat differently. The demolition and construction phases do not generate a long-term increase in noise levels. The long-term goals of the City of San Jose are not appropriate criteria for determining the significance of the noise impact upon sensitive receptors during demolition and construction. The potential for speech interference during the daytime or sleep disturbance at night are the most appropriate criteria for assessing construction noise impacts. Construction noise levels exceeding 60 dBA during the daytime or 55 dBA during the nighttime outside a residence would be significant.

Impact 1:

The project site will be exposed to noise levels in excess of 60 dBA L_{dn} due to existing and projected noise generated by traffic along major roadways adjacent to the site. However, the City of San Jose recognizes that it may not be possible to achieve an exterior noise level of 60 dBA L_{dn} at land uses along major roadways.

The proposed project includes multi-family residential development and a hotel in Section 5 along Winchester Boulevard, residential development along Hemlock Avenue, and residential development in the southeast corner of the project site adjacent to the Pacific Bell building.

The noise exposure along Winchester Boulevard is an L_{dn} of 67 to 70 dBA at the residential building setback. The L_{dn} along Redwood Avenue/Hemlock Avenue is about 60 dBA and the L_{dn} at the residential buildings proposed near the Pacific Bell building is similarly about 60 dBA. The current site plan shows building massing along Winchester Boulevard which would provide shielding for private and common outdoor activity areas.

Measures to Reduce Noise for Impact 1: Locate common residential outdoor use areas in areas that are shielded from major roadways and discourage the design of residential balconies that directly face major roadways.

(a) Common outdoor use areas for the multi-family residences should be provided at locations set back and/or shielded by buildings from traffic noise produced by Winchester Boulevard and from the mechanical equipment noise associated with the Pacific Bell building. The overall plan, as noted above, already incorporates these features. This concept should be carried out in any revisions to the Master Plan in order to reduce traffic noise in the outdoor activity areas.

(b) Outdoor balconies and patios on residential units facing Winchester Boulevard should be discouraged in the building plans. To the extent possible, private outdoor areas should be oriented into the protected courtyards created by the major buildings.

Impact 2:

The project site will be exposed to noise levels in excess of 60 dBA L_{dn} due to existing and projected noise generated by traffic along major roadways adjacent to the project site. Since exterior noise levels are in excess of 60 dBA L_{dn}, special building design for residential and retail uses may be required to meet the City and State interior noise limits of 45 dBA L_{dn}.

Under the City's Noise Element policy, residential and commercial uses proposed in noise environments above 60 dBA L_{dn} must undergo further detailed acoustical analysis to determine the amount of attenuation necessary to maintain a maximum interior noise level of 45 dBA L_{dn}. Multi-family residential development on the project site is also subject to the requirements of the State Building Code.

Measures to Reduce Noise for Impact 2: **Prepare detailed acoustical analyses specifying the treatments necessary to achieve an interior noise level of 45 dBA L_{dn} or less for residential and commercial buildings.**

(a) Multi-family residential development on the project site is subject to the requirements of the City Noise Element and the State Building Code. A detailed acoustical analysis shall be prepared and submitted with the building plans prior to issuance of a building permit specifying the treatments which have been incorporated into the plans to provide an interior noise level of 45 dBA L_{dn} or less. Physical mitigation measures, such as forced air mechanical ventilation so that windows may be kept closed at the discretion of the building occupants, sound rated windows, and/or special building constructions may be necessary for buildings proposed adjacent to Winchester Boulevard. Forced air mechanical ventilation would be necessary along Winchester Boulevard, Redwood Avenue/Hemlock Avenue, and for units located near the southeast corner within about 100 feet of the Pacific Bell building.

(b) Commercial uses are subject to the requirements of the City Noise Element. A detailed acoustical analysis shall be prepared and submitted with the building plans prior to issuance of building permit specifying the treatments necessary to achieve an interior noise level of 45 dBA L_{dn} or less. This requirements would apply for uses proposed along Winchester Boulevard and Stevens Creek Boulevard. Typically, standard commercial building construction will provide the noise reduction necessary to achieve the interior noise limit.

Impact 3:

Traffic resulting from the proposed project, in combination with other background development in the area, and the cumulative development resulting from this project and the expansion of the Valley Fair Shopping Center, would not result in a 3 dBA increase in traffic noise on any roadway in the area. The increase in traffic noise would not be substantial and the impact would be less than significant.

The proposed redevelopment of the shopping center would generate additional vehicle trips on the roadway network. Increases in noise levels due to increases in traffic along local streets serving the project site were calculated based on traffic data supplied by the transportation consultant for this project (Barton-Aschman Associates). Potential traffic noise increases were analyzed for weekdays and Saturdays. On weekdays, project-generated traffic

would increase peak hour and daily average noise levels by less than 1-2 dBA along all local street segments analyzed, including Winchester Boulevard, Stevens Creek Boulevard, and Monroe Avenue. Similar increases are predicted along all street segments analyzed except along Monroe between Stevens Creek and the site where a 3 dBA increase is expected. The projected increase in noise would be imperceptible and would be below the significance threshold of 3 dBA except along Monroe on Saturdays. Project traffic would, therefore, result in a significant noise impact upon residents of Monroe Avenue.

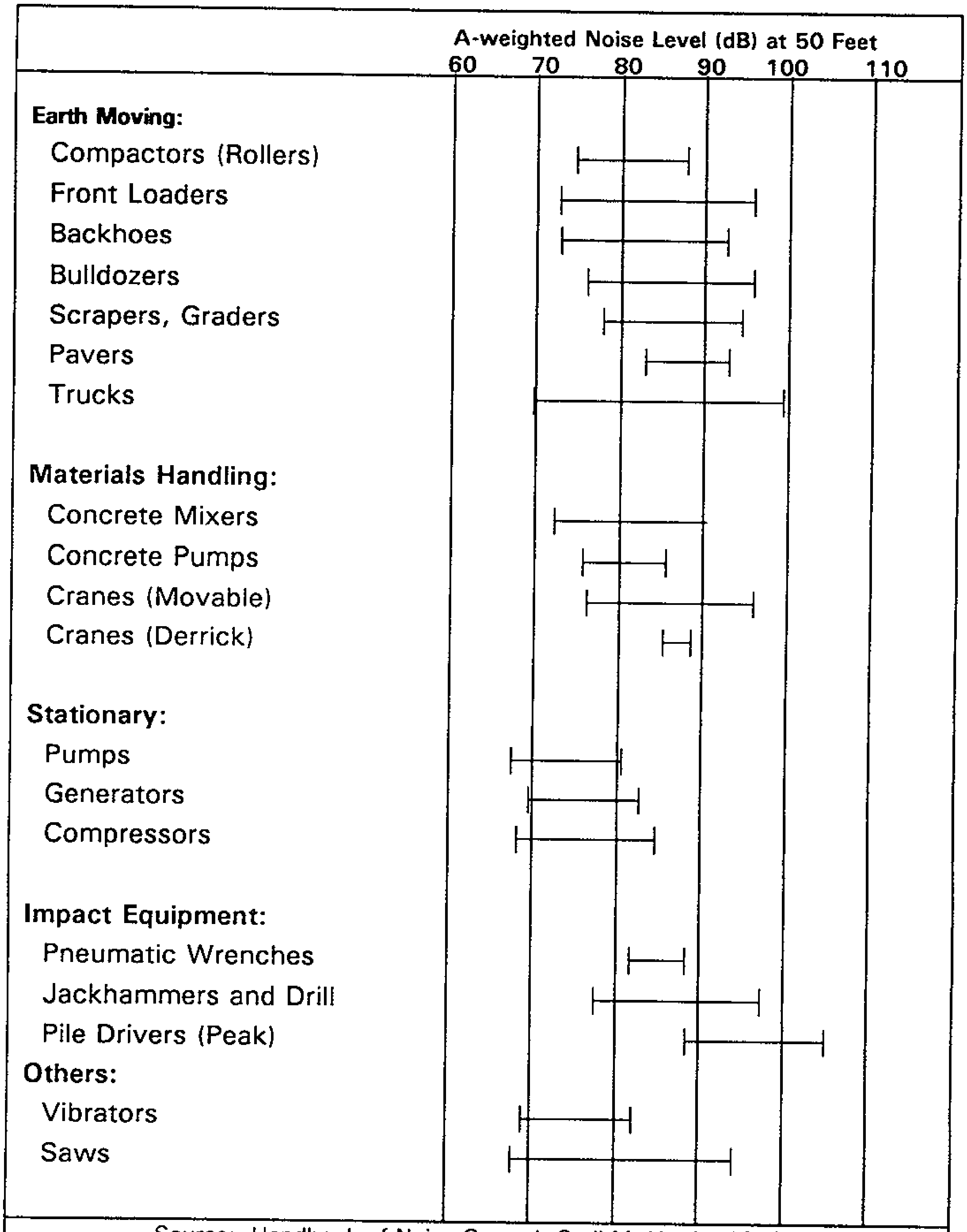
The effect of other background and cumulative trips in the vicinity of the project on noise levels in the area were also analyzed. A worst case assessment was conducted by comparing noise levels in the future assuming approved cumulative and project trips to existing traffic noise levels. Noise levels would increase by no more than 1 dBA to 2 dBA along all of the roadway segments identified above except Monroe Avenue south of Stevens Creek Boulevard, where noise levels are predicted to increase 3 dBA. The cumulative and project impacts are the same.

Measures to Reduce Noise for Impact 3: Houses along this Monroe Avenue front onto the street and have drive access. Noise barriers are not feasible. This impact is unavoidable.

Impact 4:

During project construction, residences and businesses in the vicinity of the site would be occasionally exposed to high noise levels. This is considered a significant short-term unavoidable impact.

The proposed project would demolish existing buildings on the project site and construct new buildings and parking structures. Noise impacts resulting from demolition and construction depend on the noise generated by the various pieces of construction equipment, the timing and length of noise-generating activities, and the distance between the noise-generating construction activities and the nearby sensitive receptors. Construction activities are typically carried out in stages. During each stage of construction, there will be a different mix of construction equipment operating. Construction noise levels, therefore, vary by stage and vary within each stage depending upon the number and types of equipment operating. Typical levels are shown in Tables 4 and 5. Table 4 shows maximum noise level ranges for



Source: Handbook of Noise Control, Cyril M. Harris, 1979

CONSTRUCTION EQUIPMENT NOISE LEVEL RANGE | **TABLE 4**

TYPICAL RANGES OF ENERGY EQUIVALENT NOISE LEVELS, L_{eq} IN dBA, AT CONSTRUCTION SITES

	Domestic Housing		Office Building, Hotel, Hospital, School, Public Works		Industrial Parking Garage, Religious Amusement & Recreations, Store, Service Station		Public Works Roads & Highways, Sewers, and Trenches	
	I	II	I	II	I	II	I	II
Ground Clearing	83	83	84	84	84	83	84	84
Excavation	88	75	89	79	89	71	88	78
Foundations	81	81	78	78	77	77	88	88
Erection	81	65	87	75	84	72	79	78
Finishing	88	72	89	75	89	74	84	84

I - All pertinent equipment present at site.

II - Minimum required equipment present at site.

Source: U.S.E.P.A., Legal Compilation on Noise, Vol. 1, p. 2-104, 1973.

NOISE LEVELS BY CONSTRUCTION PHASES | **TABLE 5**

The noise exposure along Winchester Boulevard is an L_{dn} of 67 to 70 dBA at the residential building setback. The L_{dn} along Redwood Avenue/Hemlock Avenue is about 60 dBA and the L_{dn} at the residential buildings proposed near the Pacific Bell building is similarly about 60 dBA. The current site plan shows building massing along Winchester Boulevard which would provide shielding for private and common outdoor activity areas.

Measures to Reduce Noise for Impact 1: Locate common residential outdoor use areas in areas that are shielded from major roadways and discourage the design of residential balconies that directly face major roadways.

(a) Common outdoor use areas for the multi-family residences should be provided at locations set back and/or shielded by buildings from traffic noise produced by Winchester Boulevard and from the mechanical equipment noise associated with the Pacific Bell building. The overall plan, as noted above, already incorporates these features. This concept should be carried out in any revisions to the Master Plan in order to reduce traffic noise in the outdoor activity areas.

(b) Outdoor balconies and patios on residential units facing Winchester Boulevard should be discouraged in the building plans. To the extent possible, private outdoor areas should be oriented into the protected courtyards created by the major buildings.

Impact 2:

The project site will be exposed to noise levels in excess of 60 dBA L_{dn} due to existing and projected noise generated by traffic along major roadways adjacent to the project site. Since exterior noise levels are in excess of 60 dBA L_{dn}, special building design for residential and retail uses may be required to meet the City and State interior noise limits of 45 dBA L_{dn}.

Under the City's Noise Element policy, residential and commercial uses proposed in noise environments above 60 dBA L_{dn} must undergo further detailed acoustical analysis to determine the amount of attenuation necessary to maintain a maximum interior noise level of 45 dBA L_{dn}. Multi-family residential development on the project site is also subject to the requirements of the State Building Code.

Measures to Reduce Noise for Impact 2: **Prepare detailed acoustical analyses specifying the treatments necessary to achieve an interior noise level of 45 dBA L_{dn} or less for residential and commercial buildings.**

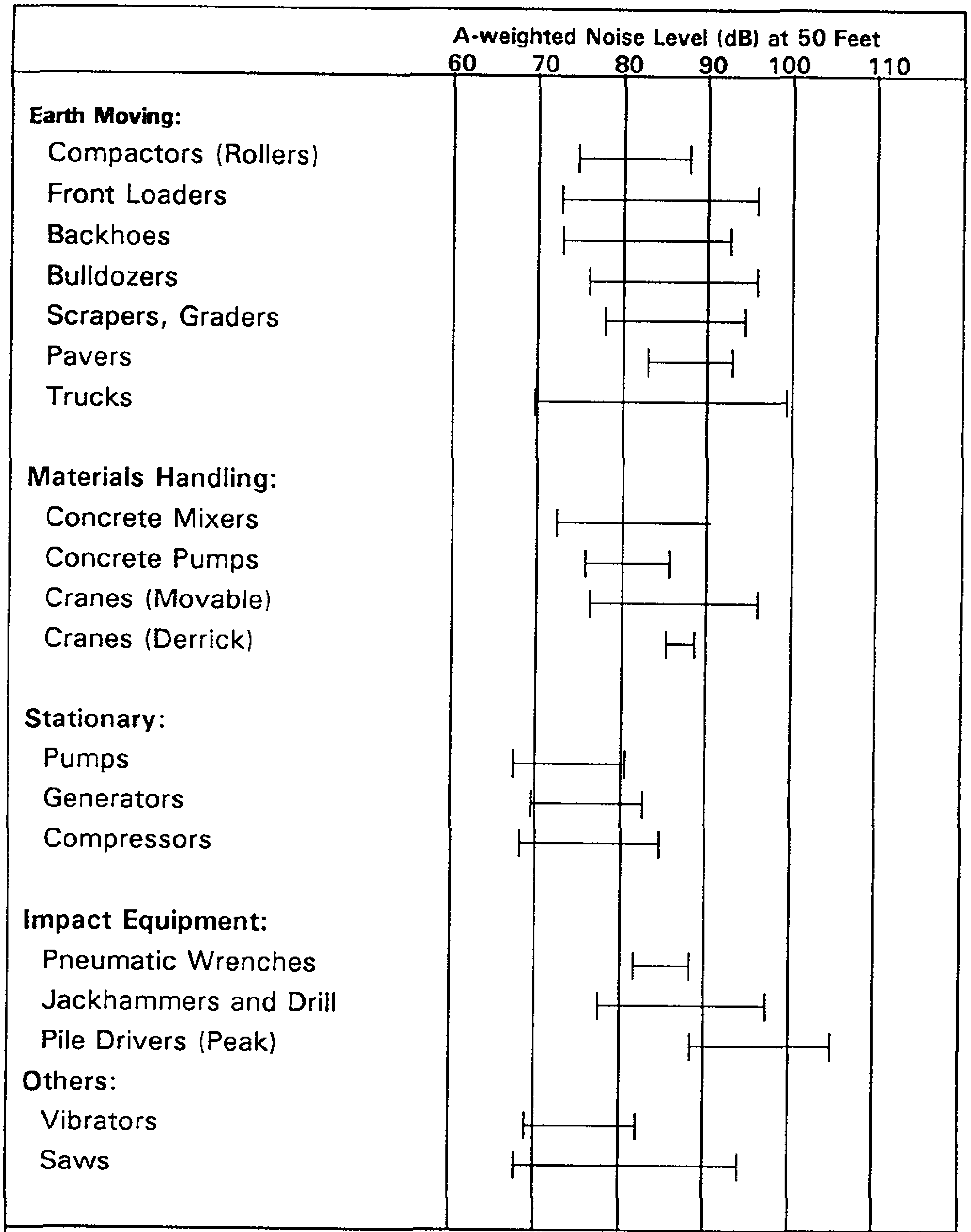
(a) Multi-family residential development on the project site is subject to the requirements of the City Noise Element and the State Building Code. A detailed acoustical analysis shall be prepared and submitted with the building plans prior to issuance of a building permit specifying the treatments which have been incorporated into the plans to provide an interior noise level of 45 dBA L_{dn} or less. Physical mitigation measures, such as forced air mechanical ventilation so that windows may be kept closed at the discretion of the building occupants, sound rated windows, and/or special building constructions may be necessary for buildings proposed adjacent to Winchester Boulevard. Forced air mechanical ventilation would be necessary along Winchester Boulevard, Redwood Avenue/Hemlock Avenue, and for units located near the southeast corner within about 100 feet of the Pacific Bell building.

(b) Commercial uses are subject to the requirements of the City Noise Element. A detailed acoustical analysis shall be prepared and submitted with the building plans prior to issuance of building permit specifying the treatments necessary to achieve an interior noise level of 45 dBA L_{dn} or less. This requirements would apply for uses proposed along Winchester Boulevard and Stevens Creek Boulevard. Typically, standard commercial building construction will provide the noise reduction necessary to achieve the interior noise limit.

Impact 3:

Traffic resulting from the proposed project, in combination with other background development in the area, and the cumulative development resulting from this project and the expansion of the Valley Fair Shopping Center, would not result in a 3 dBA increase in traffic noise on any roadway in the area. The increase in traffic noise would not be substantial and the impact would be less than significant.

The proposed redevelopment of the shopping center would generate additional vehicle trips on the roadway network. Increases in noise levels due to increases in traffic along local streets serving the project site were calculated based on traffic data supplied by the transportation consultant for this project (Barton-Aschman Associates). Potential traffic noise increases were analyzed for weekdays and Saturdays. On weekdays, project-generated traffic



Source: Handbook of Noise Control, Cyril M. Harris, 1979

CONSTRUCTION EQUIPMENT NOISE LEVEL RANGE | **TABLE 4**

would increase peak hour and daily average noise levels by less than 1-2 dBA along all local street segments analyzed, including Winchester Boulevard, Stevens Creek Boulevard, and Monroe Avenue. Similar increases are predicted along all street segments analyzed except along Monroe between Stevens Creek and the site where a 3 dBA increase is expected. The projected increase in noise would be imperceptible and would be below the significance threshold of 3 dBA except along Monroe on Saturdays. Project traffic would, therefore, result in a significant noise impact upon residents of Monroe Avenue.

The effect of other background and cumulative trips in the vicinity of the project on noise levels in the area were also analyzed. A worst case assessment was conducted by comparing noise levels in the future assuming approved cumulative and project trips to existing traffic noise levels. Noise levels would increase by no more than 1 dBA to 2 dBA along all of the roadway segments identified above except Monroe Avenue south of Stevens Creek Boulevard, where noise levels are predicted to increase 3 dBA. The cumulative and project impacts are the same.

Measures to Reduce Noise for Impact 3: Houses along this Monroe Avenue front onto the street and have drive access. Noise barriers are not feasible. This impact is unavoidable.

Impact 4:

During project construction, residences and businesses in the vicinity of the site would be occasionally exposed to high noise levels. This is considered a significant short-term unavoidable impact.

The proposed project would demolish existing buildings on the project site and construct new buildings and parking structures. Noise impacts resulting from demolition and construction depend on the noise generated by the various pieces of construction equipment, the timing and length of noise-generating activities, and the distance between the noise-generating construction activities and the nearby sensitive receptors. Construction activities are typically carried out in stages. During each stage of construction, there will be a different mix of construction equipment operating. Construction noise levels, therefore, vary by stage and vary within each stage depending upon the number and types of equipment operating. Typical levels are shown in Tables 4 and 5. Table 4 shows maximum noise level ranges for

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	I	II	I	II	I	II	I	II
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Excavation	88	75	89	79	89	71	88	78
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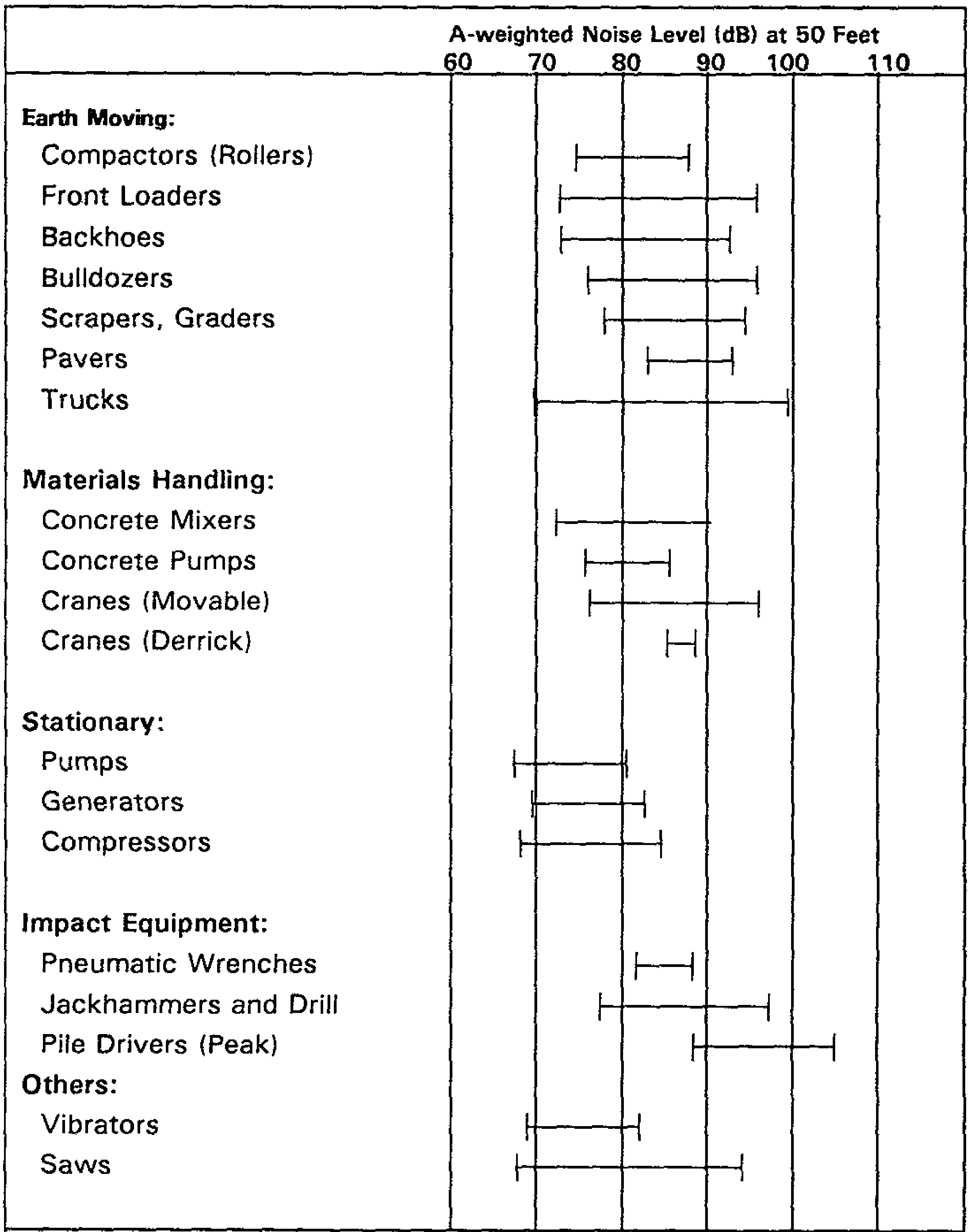

Source: Handbook of Noise Control, Cyril M. Harris, 1979

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	I	II	I	II	I	II	I	II
Ground Clearing	83	83	84	84	84	83	84	84
Excavation	88	75	89	79	89	71	88	78
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I - All pertinent equipment present at site.

II - Minimum required equipment present at site.

Source: U.S.E.P.A., Legal Compilation on Noise, Vol. 1, p. 2-104, 1973.

NOISE LEVELS BY CONSTRUCTION PHASES | **TABLE 5**

construction equipment and Table 5 shows average noise level ranges by construction phase. Most demolition and construction noise is in the range of 80 to 90 dBA at a distance of 50 feet. The nearest existing residences and businesses to the project site are along Redwood Avenue, Hemlock Avenue and Monroe Avenue at typical setbacks of 50 to 100 feet. When construction on the site occurs near these residences and businesses, noise levels would be elevated and would interfere with speech communication and other everyday activities. Average noise levels at 100 feet from the center of the construction activity would typically range from 70 to 80 dBA during busy periods of construction. Piledriving may be required for larger buildings located in the center of the site. Maximum noise levels generated from piledriving typically reach 100 dBA at a distance of 100 feet. Such noise levels occurring near the site center would result in noise levels of 85 to 90 dBA at the nearest residences within 300 to 600 feet away. Construction noise would elevate background noise levels for residences and businesses adjacent to the site up to 15 to 25 dBA. Such large noise level increases, while generally short in duration, are significant. Noise levels would be expected to regularly exceed the daytime and nighttime construction noise significance thresholds of 60 dBA and 55 dBA, respectively. As development of the site progresses and construction activities begin to move away from nearby residences and businesses, the effects of the construction noise would be lessened. However, nearby residences and businesses would be intermittently exposed to noise levels which would be expected to be disturbing throughout the construction period.

Measures to Reduce Noise for Impact 3:

(1) Demolition and construction activities should be limited to daytime hours (7:00 am to 5:00 pm) weekday, non-holidays only.

(2) All internal combustion engines for construction equipment used on the site should be properly muffled and maintained.

(3) Unnecessary idling of internal combustion engines should be strictly prohibited.

(4) All stationary noise-generating construction equipment, such as air compressors and portable power generators, should be located as far as practical from existing residences and businesses.

APPENDIX D

BURROWING OWL STUDY

97-036

H.T. HARVEY & ASSOCIATES
ECOLOGICAL CONSULTANTS

29 October 1997

RECEIVED
NOV 19 1997
DAVID J. POWERS & ASSOC., INC.

David North
David Powers and Associates
Environmental Consultants and Planners
1885 The Alameda, Suite 204
San Jose, CA 95126
(408) 248-3500
FAX: 408.248.9641

RE: Burrowing Owls at the Town and Country Village property.

Dear Mr. North:

Per your request, I have summarized my information pertaining to the Burrowing Owls at the Town and Country Village property in San Jose, California. The habitat area, roughly 5 acres, represents suitable foraging habitat for Burrowing Owls, and must be considered potential nesting habitat owing to the availability of California ground squirrel burrows. On my last visit to the site on 20 October 1997, 2 Burrowing Owls were occupying buildings adjacent to the ground squirrel habitat, and a third owl may be using the property. I suspect that the owls are roosting in and on the buildings during the day, and foraging on the habitat when less human traffic is encountered. This is likely due to the recent use of the north end of the habitat for the annual pumpkin patch. I assume that after this activity ceases, the owls will return to the habitat. Prior to 20 October, I had observed owls intermittently occupying the habitat. On my initial protocol surveys of the site in June and July 1997, I saw no owls onsite, indicating that nesting during 1997 was unlikely.

I do not know the migratory status of the owls onsite. As you are aware, Burrowing Owls in the South Bay are neither completely migratory nor completely year-round residents. Thus, it cannot be determined whether the owls currently onsite will remain through the winter, or will occupy the habitat during the next nesting season. As I indicated to Phyllis O'Shea, this may be a short-duration dispersal movement only, with the owls soon vacating the property, or this may be the start of long-term occupancy.

Ultimately, it is clear that several mitigation measures will be required when the habitat is removed in the course of site development. First, pre-construction surveys must precede any ground-altering activity, to protect against "take" of any owls occupying the site. Second, the California Department of Fish and Game (CDFG) may require mitigation to offset the loss of the 5 acres of foraging and potential nesting habitat. Finally, any owls using the site will require translocation to an unaffected habitat. Translocations are potentially of 2 types: active, and passive. An active relocation will ultimately be required to safely clear the site of owls, because no acceptable habitat exists near the

97 - 036

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906 Elizabeth Street • P.O. Box 1180
Alviso, CA 95002 • 408-263-1814 • Fax: 408-263-3823

☐ Fresno Office
423 West Fallbrook, Suite 206
Fresno, CA 93711 • 209-449-1423 • Fax: 209-449-8248

(5) Residential neighbors adjacent to the project should be notified of the construction schedule in writing.

(6) Designate a noise disturbance coordinator, responsible for responding to complaints about construction noise. The telephone number for the disturbance coordinator should be posted at the construction site and should also be included in the notice sent to neighbors regarding the construction schedule.

Alternative Site Access

The alternative circulation plan would provide secondary project access to both Redwood Avenue and Dudley Avenue. Traffic noise level increases along Redwood Avenue, Hemlock Avenue, Baywood Avenue, and Dudley Avenue near the project site were analyzed for this access alternative. Noise levels along Redwood Avenue and Hemlock Avenue are predicted to increase 1 to 2 dBA above existing noise levels. Baywood Avenue noise levels are not predicted to change. These increases are not substantial and the impacts would be less than significant. Along Dudley Avenue, noise levels are predicted to increase at least 5 dBA and probably 7 to 8 dBA near the center of the block at homes less affected by traffic noise from Stevens Creek Boulevard and Hemlock Avenue. This increase would be considered substantial and the noise impact significant. This is a narrow residential street with homes which front onto the street. It is not feasible to erect noise barriers or implement other measures to mitigate this noise impact. The impact is considered to be significant and unavoidable.

APPENDIX E

ENVIRONMENTAL SITE ASSESSMENT

ENVIRO[illegible]

2 [illegible]

ENVIRONMENTAL SITE ASSESSMENT
TOWN AND COUNTY VILLAGE SHOPPING CENTER
SAN JOSE, CALIFORNIA

Prepared for

Federal Realty Investment Trust

January 20, 1997

Prepared by

EMCON
1921 Ringwood Avenue
San Jose, California 95131

Project 22152-001.001

97-036

Environmental Site Assessment
Town and Country Village Shopping Center
San Jose, California

The material and data in this report were prepared under the supervision and direction of the undersigned.

EMCON

Peter T. Ch

Peter T. Christianson, R.E.A. 05615
Project Geologist

Mark Smolley

Mark Smolley, R.G. 4650
Project Manager

No. 4650

97-036

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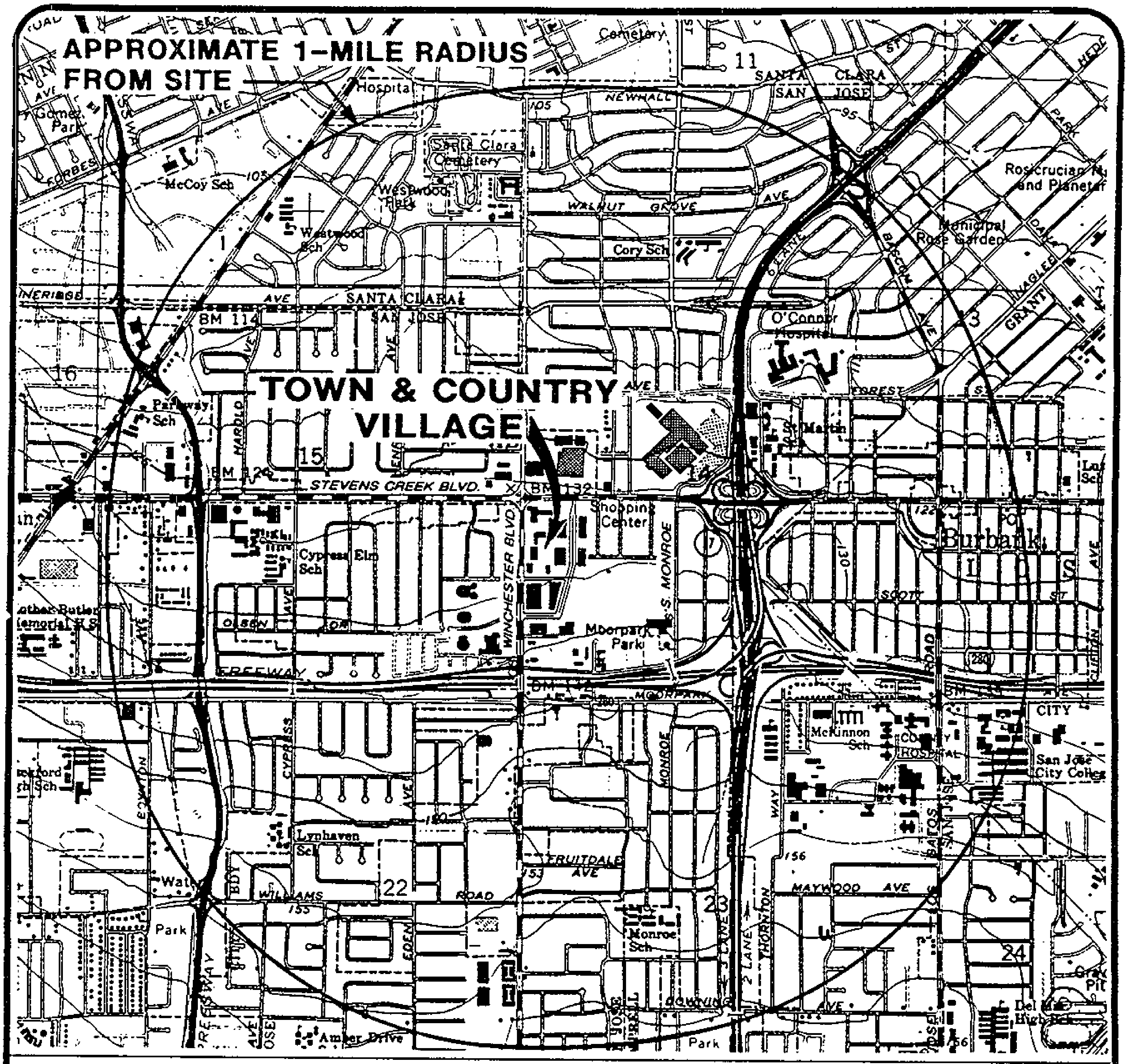

Base map from USGS 7.5' Quad. Map:
San Jose West, California. (PR 1980).

N

SCALE: 0 2000 4000 FEET

emcon

DATE 1/7/96
DWN KMM
APP
REV
PROJECT NO.
2152-001.001

Figure 1
FEDERAL REALTY INVESTMENT TRUST
TOWN & COUNTRY VILLAGE
STEVENS CREEK BLVD. – SAN JOSE, CA
97-036 **SITE LOCATION**

EA-SANJOSE-CAD/DRAWINGS: I:\2152001\TBLOX.dwg Xrefs: <NONE>
Scale: 1 = 1.00 DimScale: 1 = 1.00 Date: 1/7/97 Time: 11:18 AM Operator: KMM

1 INTRODUCTION

This report documents the results of an environmental site assessment (ESA) conducted at the Town and County Village Shopping Center (TCVSC) at 2980 Stevens Creek Boulevard, and the adjacent Courtesy Chevrolet facility at 3030 Stevens Creek Boulevard, San Jose, California (Site, Figure 1). The ESA was conducted by EMCON on behalf of Federal Realty Investment Trust (Federal) in order to complete an environmental assessment of the Site and support Federal's application to the Department of Toxic Substances Control (DTSC) for a prospective purchaser agreement. This ESA was prepared according to guidelines presented in the Preliminary Endangerment Assessment Guidance Manual (DTSC, January 1994).

The Site has been used as a shopping center for various tenants and as an auto dealership since approximately 1960. Prior to that, the Site was used for agriculture. The following sections of this report present pertinent historical and current Site information, results of soil and groundwater sampling, and results of a risk analysis conducted in an effort to identify recognized environmental conditions, and the appropriate level of remediation (if any) for the Site. The field investigation was conducted in December 1996 and January 1997.

1.1 Scope of Work

The scope of work for this ESA included the following:

- Review reports on previous environmental investigations conducted at the Site.
- Review aerial photographs and interview person(s) in order to obtain information regarding historical operations at the Site.
- Collect soil samples from 10 hand-auger borings and three well borings
- Install three groundwater monitoring wells and collect groundwater samples from the wells.
- Analyze soil and groundwater samples for chemical compounds which may have impacted the Site based on historical background data

- Measure groundwater levels and survey the well casings to determine the groundwater flow direction and gradient

- Perform a human health and ecological screening evaluation for the Site

- Prepare this ESA report which includes findings, conclusions, and recommendations

2 SITE DESCRIPTION

The Site encompasses approximately 37.7 acres and includes the Town & Country Village Shopping Center (TCVSC), Courtesy Chevrolet, the Town and Country Tennis Club, and an adjacent vacant lot (Figure 2). The TCVSC includes 139 business suites in 10 buildings and an associated work shop and storage area. Buildings 3, 9, 10, and 21 are two story and the remaining buildings are single story. The TCVSC buildings are of wood construction. TCVSC's address is 2980 Stevens Creek Boulevard (cross Street Winchester Boulevard), San Jose, California with the various businesses designated by their respective unit numbers.

Courtesy Chevrolet is located at 3030 Stevens Creek Boulevard and includes three buildings and a three-story parking garage. The tennis club is located in the southeastern quadrant of the Site and has eight tennis courts and a two-story clubhouse. The vacant lot located on the eastern portion of the Site is covered with grassy vegetation and comprises approximately 2.4 acres. Overall, the Site is flat lying and is 95 percent covered with asphalt or buildings. The TCVSC, tennis club, and vacant lot have three assessor parcel numbers (APN) 277-33-005, 277-33-007, and 277-40-003. Courtesy Chevrolet has APN 277-33-004.

The contact persons for the Site are:

- Phillis O'Shea, Town & Country Property Manager, 408-248-8003
- Dave Spencer, Courtesy Chevrolet, Executive Manager, 408-249-3131

The current owner of the Site is:

- Metropolitan Life Insurance Company, 101 Lincoln Centre Boulevard, Suite 600, Foster City, California, 94404.

The Site is currently zoned for commercial use and planned future use remains commercial with more intense development along Stevens Creek and Winchester Boulevards.

3 BACKGROUND

The following sections discuss historical information related to the Site and surroundings, hazardous substances and waste management practices.

3.1 Historical Site Information and Surroundings

Information regarding the Site history and surrounding property uses was obtained by reviewing previous environmental assessments for the Site and aerial photographs. This information is summarized below. As part of the historical information search, EMCON visited the San Jose Public Library on November 27, 1996, in an attempt to review Sanborn Maps for the Site. No maps were available for this area.

3.1.1 Previous Environmental Assessments

Previous environmental assessments have been conducted at the Site. These reports are summarized below and are included in the references section at the end of this report. The locations of borings conducted during these previous environmental assessments are presented in Figures 2 and 3, and a summary of the previous analytical results are presented in Table 1.

3.1.1.1 Former Agricultural Area

Woodward-Clyde Consultants, July 1985. In July 1985, Woodward-Clyde Consultants (WCC), performed an environmental investigation of approximately 14 acres adjacent to the east side of the TCVSC. Only a small portion of this investigation was conducted on the Site. The environmental investigation included a visual inspection and the collection of six surficial soil samples (plus two duplicates) for the analysis of pesticides, polychlorinated biphenyl's (PCBs), and arsenic (WCC, August 13, 1985).

The visual inspection detected the presence of three spills of waste crankcase oil; however, these spills were not located on the Site. Three of the eight soil samples (TCG-1 through TCG-3) collected were from the unpaved vacant lot portion of the Site included in this study (WCC, August 13, 1985).

The sum of the detected concentrations of organochlorine pesticides (DDT, DDE, and DDD) for soil samples TCG-1 through TCG-3, ranged from 2.8 to 6.86 parts per million (ppm) (Table 1). Also detected were trace concentrations of organophosphate pesticides, acid and phenolic pesticides, and carbamate and urea pesticides (DEF, ethion, dinoseb (DNBP), 2,4-D, 2,4,5-TP, chloropham, and methiocarb). Arsenic was detected at concentrations ranging from 59 to 85 ppm (WCC, August 13, 1985).

AllWest, August & December 1992. In August 1992, AllWest completed an environmental review of the Site for Metropolitan Life Insurance Company (Metropolitan). AllWest concluded the Site had previously been used for agriculture, most likely orchards. AllWest recommended that Metropolitan resample for the chemicals detected in the WCC investigation (AllWest, August 2, 1993).

In December 1992, AllWest conducted a soil investigation by collecting fourteen soil (TCSS-1 through TCSS-14) samples from 10 shallow (1 to 1.5 feet below the ground surface) borings on the approximate 14-acre undeveloped parcel of land. The samples were analyzed for organochlorine, organophosphate, and carbamate and urea pesticides. Seven of the fourteen samples (TCSS-1 through TCSS-7) were located on site while the remaining samples were located off site to the east. Organochlorine pesticides were detected in all seven samples at concentrations ranging from 2.0 ppm to 15.4 ppm. Arsenic was also present in the samples and ranged from 0.11 to 0.44 ppm. Organophosphate and carbamate and urea pesticides were not detected. AllWest concluded that DDT and DDE were present in soil at elevated concentrations in two areas on the Site. The vertical extent of impact was approximately 1.5 feet and the horizontal extent was not delineated (AllWest, August 2, 1993).

AllWest, June 1993. In June 1993, AllWest collected 23 (SS-1 through SS-23) additional soil samples to delineate the two areas of high pesticide impact which were located in the unpaved portion of the Site. Pesticides were present in all 23 samples ranging from 0.03 to 5.19 ppm (AllWest, August 2, 1993).

Innovative & Creative Environmental Solutions, September and October 1995. In September and October 1995, Innovative & Creative Environmental Solutions (ICES) conducted remedial activities for soil impacted with pesticides at the vacant lot adjacent to the eastern side of the Site (not on site). The remedial activities included excavating and disposing of approximately 18 cubic yards of soil having pesticide concentrations exceeding 3 ppm. Additionally, approximately 30,000 cubic yards of pesticide-impacted soil was mixed with clean soil to produce concentrations in the blended soils below 1 ppm (ICES, October 26, 1995).

3.1.1.2 Courtesy Chevrolet

AllWest, March 1994. In March 1994, AllWest witnessed the removal and performed confirmation soil sampling beneath four USTs located at the Courtesy Chevrolet facility in the northwest corner of the Site. The USTs ranged in size from 500 to 4,000 gallons and stored gasoline, bulk oil, and waste oil. A total of eleven confirmation soil samples were obtained from the UST excavation. The nine samples (T-3-E, T-3-W, T-4-E, T-4-W, SW-north, SW-south, SW-east, SW-west) collected from the western side of the UST excavation confirmed no petroleum hydrocarbon impact. Due to elevated concentrations of petroleum hydrocarbons in the eastern half of the excavation, the eastern half was overexcavated and an additional five confirmation soil samples (T-1-E2, T-1-W2, T-2-C2, SW-E2, SW-S2) were collected. AllWest concluded that overexcavation removed the majority of the impacted soil and reduced petroleum hydrocarbon concentrations in the soil from 2,800 ppm to 61 ppm. However, impacted soil was still present in the southeastern quadrant of the UST zone and in the northern and eastern sidewalls. Due to an adjacent masonry wall and the limitations of the excavation equipment, additional over-excavation in these areas was considered impractical (AllWest, June 29, 1994).

AllWest, May 1994. In May 1994, AllWest conducted an environmental audit of the Courtesy Chevrolet facility. AllWest's findings included the presence of 10 underground hydraulic lifts, 7 aboveground hydraulic/mechanical lifts, two metal aboveground storage tanks for temporarily containing waste oil, one metal AST for temporarily containing waste coolant, and an oil-water separator/clarifier. AllWest concluded the primary environmental concern at the site is an accidental release of waste motor oil or coolant (AllWest, June 14, 1994).

AllWest, November 1994. In November 1994, AllWest conducted a subsurface investigation within and adjacent to the former UST zone. The investigation involved the drilling and sampling of four borings (SB-1 through SB-4) to a maximum depth of 60 feet below the ground surface (bgs). The soil samples were analyzed for TPHG and benzene, toluene, ethylbenzene, and xylenes (BTEX). All analytes were below detection limits (AllWest, November 28, 1994).

Santa Clara Valley Water District, November 1996. In November 1996, the Santa Clara Valley Water District (SCVWD) informed Metropolitan Life Insurance that no further action would be required for the former USTs at the Courtesy Chevrolet facility (SCVWD, November 18, 1996).

3.1.1.3 Former Dry Cleaners

AllWest, March 1995. In March 1995, AllWest conducted a subsurface investigation at the former dry cleaning facility located in the southeastern portion of the property in unit #906 of Building 9. The investigation included vapor and soil sampling from two geoprobe boreholes. The vapor samples were collected from a depth of four feet bgs and soil samples were collected from depths of five and ten feet bgs within each boring. The samples were analyzed for VOCs. PCE was detected in both vapor and all four soil samples. In the soil samples, PCE ranged from 0.018 to 0.042 ppm. The horizontal or vertical extent of the PCE was not delineated (AllWest, March 27, 1995).

3.1.1.4 Town and Country Village Shopping Center

AllWest, August 1996. In August 1996, AllWest performed an environmental assessment of the Site which included a site inspection, review of aerial photographs, interviews, review of historical information and documents. This scope of work is essentially the same as conducted for a typical Phase I site assessment. Based on the assessment, AllWest recommended the continued in-place management of pesticide containing soils in the vacant lot portion of the Site, and the continued pursuit of a case closure letter for the former USTs at the Courtesy Chevrolet facility. No other recognized environmental conditions were identified, and no further environmental investigations were recommended (AllWest, September 12, 1996).

3.1.2 Historical Aerial Photograph Review

Four historical aerial photographs were purchased from Air Flight Services (AFS), Santa Clara, California for enlargement and review. These oldest photograph dates back approximately 35 years (September 12, 1961, July 27, 1972, June 28, 1979, and July 2, 1985). The photographs show the Site and adjacent off-site properties. The 1979 and 1985 photographs are stereo pairs.

A photograph dated August 20, 1957, was reviewed at AFS and showed the entire Site property under cultivation for agriculture. No farm buildings or production well heads were observed in the photograph. The 1957 photograph and photographs from 1950 and 1939 were similar, and were not purchased for enlargement.

September 12, 1961 Photograph (#4749; approximate scale 1"=210'). This photograph shows Courtesy Chevrolet (except for the 3-story parking garage) and most of the TCVSC buildings constructed except for Buildings 9 and 21, the Ocean Harbor Restaurant, and the tennis club. The parking lots are generally covered with asphalt and full of cars. The asphalt adjacent to Buildings 6 and 8 and an area southeast of Building 3 appears darker than the other asphalted areas and may be newly installed. No asphalt is present on the east side of Buildings 6 and 10 and the land is undeveloped over to South Monroe Street. The storage building on the east side of the parcel has not been constructed but a storage area is present and appears to contain stacked lumber or railroad ties. No asphalt surface in the storage area is evident.

The area on the western central portion of the block (known as Lands of Guarantee Savings and Loan Association and Lands of First National Mortgage Company), which is not part of the TCVSC, appears to be under construction. The area around the buildings appears unpaved.

Stevens Creek Boulevard is located along the northern boundary of the TCVSC. To the east is residential property and undeveloped land. Orchards and residential property border the TCVSC to the south and residential property is present across Winchester Boulevard to the west. No environmental concerns are visible in this photograph.

July 27, 1972 Photograph (#SC-61; approximate scale 1"=230'). In this photograph, the Courtesy Chevrolet parking ramp, Building 9, Building 21, and the Ocean Harbor Restaurant have been constructed. The two buildings on the western central portion of the block, which are not part of the TCVSC, have been constructed. The asphalt parking lot east of Buildings 6 and 9 has been installed and appears as it does today. One-half of the present-day storage building has been constructed and the storage yard appears full of stacked materials. No asphalt surface is evident in the storage yard. The eastern half of the TCVSC is undeveloped over to South Monroe Street.

The off-site properties appear the same as in the previous photograph except for a new building located south of TCVSC Building 9 and the new Pacific Bell building adjacent to the southeast corner of the Site. No environmental concerns are visible in this photograph.

June 28, 1979 Photograph (#11435; approximate scale 1"=170'). In this photograph, the tennis courts have been constructed and an addition has been built onto the east side of the storage building. The storage yard appears full of stacked lumber, but it is not apparent whether the yard is paved. Discolored soil on the eastern undeveloped portion of the TCVSC indicates a road trending northeast.

To the north across Stevens Creek Boulevard is Valley Faire Shopping Center with the parking lots full of cars. The off-site property to the east and south appear the same as the previous photograph. The off-site properties to the west are not visible. No environmental concerns are visible in this photograph.

July 2, 1985 (#8-10; approximate scale 1"=180'). This photograph appears the same as the previous one with no environmental concerns visible.

Summary. The TCVSC has been used for commercial businesses since approximately 1960. Current tenants include retail, restaurant, entertainment, and service operations. Prior to approximately 1960, the Site was used for agriculture.

Operations at the Site which present environmental concerns include the previous agricultural usage, Courtesy Chevrolet, and a former dry cleaners. Previous environmental assessments for these operations are summarized in Section 3.3.

The surrounding properties were generally developed in the 1960's, at the same time as the TCVSC. The surrounding properties are zoned for commercial or residential uses. To the north of the Site is Valley Faire Shopping Center across Stevens Creek Boulevard.

Residential housing borders the Site to the northeast and property to the east is currently under development for single family housing. To the southeast and south are office buildings. To the west is the Winchester Mystery House, Century Twenty-One Movie Theaters, a gasoline service station, and several restaurants.

3.2 Hazardous Substance/Waste Management Information

In order to collect information regarding hazardous substances and waste management practices at the Site, EMCON reconnoitered the outside areas of the Site, inspected several of the tenant spaces, and interviewed an employee knowledgeable about the history of the Site. This information is summarized below.

3.2.1 Outside Site Reconnaissance

On December 11, 1996, Messrs. Peter Christianson and Tom Cooper of EMCON performed a reconnaissance of the outside portions of the Site. Mr. Rick Pestana, Operations Manager for TCVSC, accompanied EMCON personnel on a portion of the reconnaissance and answered questions related to the Site. Findings from the reconnaissance include the following:

- Tallow dumpsters were present behind several of the restaurants for the collection of waste grease. The Ocean Harbor Restaurant had a underground vault which Mr. Pestana believed to be a grease trap to restrict grease from entering the sewer.

- Outside housekeeping was generally good around the buildings and in the dumpster areas; however, trash and plant cuttings had been dumped in an area between the Courtesy Chevrolet parking garage and the property to the west.

- Several hundred feet of asphalt patching was observed along an underground sewer line on the south side of Building 3. Mr. Pestana said excavation along the sewer line was recently conducted in order to connect the new housing project, east of the Site, to the sewer trunk line along Winchester Boulevard.

- Asphalt around the TCVSC was in good condition in the well traveled areas (main thoroughfares), but was heavily cracked in some of the other areas such as parking lots and alley ways. No staining other than small oil stains from parked cars were visible.

- Wooden sheds located behind the buildings are used to house electrical meters, transformers, water conditioners and heaters, and some maintenance supplies for the TCVSC maintenance staff. EMCON requested that several of the sheds be opened for inspection. The sheds had concrete floors and floor drains were observed in some of the sheds. Tenants have access to some of the sheds for storage. Paint cans were found in one of the sheds.

- Approximately 27 transformers, which service the TCVSC, are present in the wooden sheds behind the buildings. The transformers are owned by Pacific Gas & Electric (PG&E) and are reportedly 30 plus years old. Verbal information from PG&E indicates polychlorinated biphenyls (PCBs) have been removed from all PG&E transformers. The wooden sheds containing the transformers were locked by PG&E and no direct observations were possible during the site reconnaissance. Two of the 27 transformers are on telephone poles on the southern property line behind Building 10. No staining was observed on the ground beneath the transformers.

- The work shop on the east side of Building 3 is divided into three areas. One area is used for the storage of weed wackers and small quantities of gasoline (less than 5-gallons), the second area does not have a roof and contains four transformers (PG&E owned), the third area is the largest and is a general maintenance area. Spare parts, hardware, and some small quantities of cleaning solutions were observed in this area. No stains or cracks were observed on the concrete floor of the work shop at the time of the reconnaissance.

- Rectangular steel vault covers (approximately 2 feet by 3 feet) were observed at regular intervals adjacent to the buildings. Mr. Pestana said these vaults housed telephone and electrical utilities for the various buildings. EMCON was not able to access and inspect the interiors of the vaults.

- A depression in the soil was observed on the vacant lot on the eastern portion of the Site, just north of the tennis club. The depression appears to be an old excavation and is approximately 2-feet deep and approximately 300 feet long by 40 feet wide. One pile of soil (approximately 1 cubic yard) appeared to have been dumped on the southern end of the excavation. No staining was observed on the soil pile and no odors were noticed. The unpaved vacant lot and excavation were covered with grasses. No staining or stressed vegetation was observed.

- Imported soil was observed on the eastern half of the unpaved vacant lot. The soil was spread out to a thickness of approximately six inches. The source of the imported soil is not known; however, the soil did not appear stained, and no odors were evident.

- The asphalt-surfaced Site storage area contained two small sheds and a larger storage building. The smaller storage sheds were filled with paints contained in variously sized cans. The larger storage building contained lumber, vacuums, and rolls of asphalt roofing paper. On the eastern side of the storage building, EMCON observed three empty compressed gas cylinders, seven 55-gallon drums of which four were open and full of unknown liquids, and four, 5-gallon buckets which were open and contained black, oily liquids. Also present were three, 55-gallon drums full of soil cuttings from a previous soil investigation. The drums were labeled "B-1" and dated October 1995. No staining was observed on the asphalt in this area.

- Under the stairs in the central portion of Building 3 is a storage area for janitorial supplies and cleaning agents. Restrooms are located adjacent to this storage area, on the east side. No environmental concerns were observed in these areas.

3.2.2 Tenant Inspections

On January 8, 1997, EMCON inspected seven of the tenants at the Site. These tenants were picked for inspection because their operations appeared representative of their respective building or because they appeared to be the most likely to present environmental concerns. The building locations are presented in Figure 2.

Former Dry Cleaners, Building 9, Unit #906. The dry cleaner is no longer in operation and the building unit is currently used for storage (mostly Christmas decorations used by the TCVSC property manager). Since boxes are covering approximately 60 percent of the floor space, many floor areas could not be checked for staining. Staining was observed on the floor in the southeastern corner of the unit where the former dry cleaning machine used to be located. Miscellaneous pipes were observed throughout the ceiling of the unit, much of which was wrapped with potentially asbestos-containing insulation. A closet in the back of the unit contained some partially full cans (less than 1 gallon capacity) of paint, motor oil, gear oil, and paint thinner. An empty 1-gallon gasoline can was observed in one of the two restrooms. A Bay Area Air Quality Management District (BAAQMD) permit to operate for the dry cleaner was still visible on the wall. The aerial photographs were reviewed to determine if a dumpster area could be identified for the dry cleaners. None was found.

Playland, Building 10, Unit #1015. Playland occupies approximately 20,000 square feet, and contains a bumper car area, pinball and video arcade machines, a snack bar, an office, and several party rooms. A janitorial closet contained some general cleaning compound containers and a technicians room contained miscellaneous arcade machine parts and a small oil lubrication can. No environmental concern areas were observed.

AMC Town and Country Theaters, Building 9, Unit #915. This unit contained one theater, an office, a snackbar, an employee room, and several closets. Supplies for general cleaning were observed in one of the closets. No environmental concern areas were observed.

Western Mountaineering, Building 8, Unit #840. This unit sells outdoor recreational sports equipment. Some solvents are stored on site for ski and kayak repair. Also present were cans of white gas for camp stoves and oil finishes and Kevlar resins for boats. All containers were less than one gallon and are either sold as products or the contents are used prior to disposal. No environmental concern areas were observed.

Town and Country Dry Cleaners, Building 6, Unit #645. No dry cleaning takes place in this unit. All clothes are shipped to an off-site location for dry cleaning. Within the unit were two presses for ironing clothes. Steam was provided to the presses by an electric boiler. Also observed were two, 1-quart jugs for paint, a 1-gallon container of Odor Away, and a 1-quart can of spot remover. No environmental concern areas were observed.

The Cobblers Bench, Building 6, Unit #626. This unit is used for shoe repair and provides shoe polish for sale. When entering the shop, a strong chemical odor was present. In the front portion of the shop was the shoe repair area with two buffing machines and operators. In the middle of the shop along the southern wall was a small fume hood (1 foot by 2 feet) surrounded with shelves containing leather dyes, paints, deglazing fluids, and acetone. The containers were approximately 8 ounces to 1 gallon in volume and are apparently used until the contents are gone. Small stains (1 to 2 inches) were observed on the floor around the fume hood area but most of the floor was covered with carpet. The concrete floor exposed around the fume hood appeared sound with no cracks observed. In the back of the shop were seven, 1-gallon cans of Super Solvent along with storage for spare soles. Also observed were two, 1-gallon cans of rubber cement. No environmental concerns to the subsurface were observed.

Town and Country Tennis Club. The tennis club consists of eight courts and a 2-story tennis club. In front of the clubhouse and in a storage shed in the rear of the clubhouse were approximately ten, 5-gallon plastic buckets of paint for the courts. Also observed were approximately five, 1-gallon cans of paint and a can of paint thinner. No environmental concern areas were observed.

Courtesy Chevrolet. As stated previously, the Courtesy Chevrolet facility includes three buildings and a 3-story garage. Both automobile sales and repair are conducted at this location. Sales, offices, spare parts, and a concession stand are located in the front building along Stevens Creek Boulevard. Automobile maintenance, repair, and detailing are located in the other buildings which are divided into approximately thirty service bays. The lower level of the garage is used for servicing autos and for parts storage. The upper two levels are used for storage of new cars and employee parking.

Wastes generated at Courtesy Chevrolet include waste oil, oil filters, waste engine coolant, waste storage batteries, rags and wipes. Wastes are reportedly removed and disposed of by licensed vendors. Several USTs were removed from the property in 1994. Information regarding the removal and additional assessment information is presented in Section 3.1.1.

Based on the inspection of Courtesy Chevrolet, several environmental concern areas were identified and include the following:

- **Service Bay Drain Line.** Approximately 950 feet of grated drain line, open to the surface, is located in front of the service bays. The drain is concrete lined and reportedly flows to the storm drain. This drain collects all storm water run-off from the asphalted parking areas and collects all water and fluids which drain from the service bays. During the inspection, the interior of the drain line looked black and oily.

- **Oil Water Separator.** An oil-water separator is present in front of the car wash. This separator collects water from the car wash and possibly water from the drain line prior to the connection with the storm drain. The separator is underground and constructed of concrete.

- **Hydraulic Lifts.** Approximately ten hydraulic lifts are present within the service bays. Some of these lifts have been taken out of service but associated components (hydraulic tanks, piping, vaults, etc.) still exist. During the inspection, the vaults and piping appeared very oily.

- **Waste Coolant and Waste Oil Tanks.** Two aboveground storage tanks (ASTs), one for waste coolant and one for waste oil, were observed during the inspection. The ASTs are placed on concrete floors within the service bays. Staining around the ASTs indicated that some spillage had occurred.

- **Oil Tanks Enclosure.** An enclosure on the southern side of the office building contains three oil ASTs and an air compressor. The concrete floor near the air compressor was stained with an oily residue. Near the ASTs, oily water approximately 1-inch deep, covered the concrete floor.

- **Service Bay.** One of the service bays on the western side of the facility was constructed with a concrete floor approximately four feet lower than the surrounding bays. The concrete floor in this depressed area was stained black from oil and a floor drain was present indicating the potential for fluids to accumulate in the area.

3.2.3 Interviews

On January 9, 1997, Paul Ross was contacted regarding historical environmental concerns regarding the Site. Mr. Ross has worked at several of the businesses at the TCVSC including Orion Security, E & R Janitorial, and Chimney Man. Mr. Ross has worked at the Site since 1971. Mr. Ross said he was unaware of any illegal dumping of liquids or solids, USTs or ASTs, drum storage areas, odors, former wells, or stained areas outside of the building premises. He said some pooled rain water accumulated in front of the AMC Movie theater and that fueling and maintenance of the Orion Security cars was performed at off-site service stations. Mr. Ross stated the most likely place for the storage or dumping of liquids would be in the Site storage area on the eastern side of the property.

Mr. Ross said the TCVSC buildings and some Site retaining walls were built with railroad ties which contained creosote. Storage of the ties occurred in the storage area on the eastern portion of the Site during construction of some of the buildings. Mr. Ross believed the buildings contained piping with lead solder.

3.2.4 Summary

Hazardous materials are stored in some of the tenant spaces including paints, motor oil, gear oil, solvents, thinners, varnishes, resins, dyes, deglazing fluids, gasoline, and janitorial cleaning agents. The materials are stored in small quantities of not larger than 5-gallons. Only small stains were observed on floors of some of the tenants.

Several drums and 5-gallon buckets of unknown liquids, empty compressed gas cylinders, and drums of soil cuttings were observed in the Site storage area. Some storage sheds in the rear of the buildings were used by tenants and may have stored hazardous materials or wastes. Limited dumping of soil was observed on the eastern, unpaved vacant lot.

Restaurants at TCVSC have grease bins at the rear of their facilities for the disposal of waste grease. Dumpsters are positioned around the TCVSC for the tenants use. The dumpster material is disposed of as Class III municipal waste.

Approximately 27 transformers are present on the Site which are used to regulate electricity to the Site buildings. The transformers are 30 plus years old and are owned by PG&E who has reportedly removed PCBs from all of their transformers. The transformer storage areas were not accessible during the site reconnaissance.

Courtesy Chevrolet is the only tenant at the Site which appears to generate and dispose of California hazardous wastes. These include waste oil, oil filters, waste engine coolant, used automobile batteries, and rags and wipes. The waste coolant and waste oil are temporarily stored on site in above-ground storage tanks, the oil filters are crushed and placed in drums, and the used batteries are stored on a pallet under an overhanging roof.

These materials are picked up at periodic intervals and are recycled or disposed of by licensed facilities. Several environmental concern areas were identified during the inspection that may require further assessment.

Known leaks at the Site have occurred from the former USTs at the Courtesy Chevrolet facility and the former dry cleaning operation in unit 906. In addition, agricultural operations have impacted the Site.

4 RECOGNIZED ENVIRONMENTAL CONDITIONS

This section summarizes the available information concerning recognized environmental conditions at the subject site. Recognized environmental conditions are defined in ASTM E 1527 - 94, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*[1].

PEA guidance states that this section of a PEA report should:

- list known or potential sources of contamination,
- document spills or releases,
- identify contaminants of concern,
- identify primary human and environmental resources of concern,
- describe the exposure pathways.

4.1 Known or Potential Sources of Contamination

Historical and current activities that constitute known or potential sources of contamination include:

- Agriculture

  Agricultural operations at the Site were discontinued around 1960. Agricultural operations can widely distribute chlorinated pesticides, lead arsenate, and other agricultural chemicals, across a property.

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[1] The term *Recognized Environmental Condition* means the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include de minimis conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

- Automotive service

  An automobile dealer, Courtesy Chevrolet, occupies the northwest corner of the Site. The dealership performs major service on vehicles, stores hazardous substances and petroleum products related to vehicle service, and has a clarifier (oil-water separator) for surface runoff.

- Dry cleaning

  Formerly, a dry cleaning establishment occupied one of the tenant spaces in the shopping center. Dry cleaners utilize hazardous substances and petroleum products.

- Storage and maintenance

  A small workshop is located on-site, used by shopping center maintenance personnel; small quantities of hazardous substances and petroleum products are stored in the workshop.

4.2 Spills or Releases

Based on a review of historical information, there are no documented events of spills or releases. A number of environmental investigations have been conducted at the Site as follow up to owner-commissioned environmental site assessments, and in conjunction with the closure of underground storage tanks at the automobile dealership. The results of these investigations indicate that "spills or releases" have occurred at the Site. Evidence includes:

- Agricultural chemicals detected in soil samples site-wide,
- PCE detected in soil samples at the former dry cleaner,
- Lead in soil at levels above background, detected at one location.

4.3 Contaminants of Concern

An initial set of contaminants of concern was developed from previous environmental investigations:

- Organochlorine pesticides (DDT, DDD, DDE)
- Arsenic

- PCE
- Petroleum hydrocarbons

The results of this investigation detected additional contaminants:

- Lead
- Petroleum hydrocarbons (diesel and heavy oil, only)

4.4 Primary Human and Environmental Resources of Concern

The entire Site is currently under commercial use, or undeveloped. Potential human receptors are (1) employees of the businesses located on-site and (2) customers. No habitats for ecological receptors are present across the paved and developed portion of the Site. The undeveloped area is a highly disturbed area (mainly due to past grading) dominated by weedy species and ground squirrels. Risks to environmental resources are expected to be minimal at this site.

4.5 Exposure Pathways

Human Receptors. The primary routes are inhalation of dust or volatiles, ingestion of soil, and dermal contact with soil. Potential exposure pathways for human receptors are described in Section 7.1.2.

Environmental Resources. No viable undisturbed habitats or special status species are present. The observed species are opportunistic and highly tolerant of human disturbance. Based on these observations, the absence of sensitive receptors indicates an incomplete exposure pathway. This is discussed further in Section 8.3.

5 ENVIRONMENTAL SETTING

5.1 Soil Pathways

The site and surrounding area are relatively flat and lie at an elevation of approximately 130 feet above mean sea level (Figure 1). Soil beneath the site consists of unconsolidated sediments (clays, sands, and gravels) to at least 75 bgs. The geologic logs for the groundwater monitoring wells at the Site are included in Appendix B.

Impacted soil at the Site includes subsurface soils near the underground storage tanks (USTs) at Courtesy Chevrolet in the northeastern part of the Site, soil beneath a building previously occupied by a dry cleaner in the southeastern part of the Site, and surface and subsurface soil in a vacant lot in the eastern part of the Site. Impacted soil in the northeastern part of the Site is limited to total petroleum hydrocarbons (TPH), benzene, toluene, ethylbenzene, and xylenes (BTEX). The USTs have been removed and most contaminated soil was excavated and removed (AllWest, 1996). Impacted soil in the southeastern part of the site is limited to tetrachloroethene (PCE) beneath a currently unoccupied building. Contaminated soil in the vacant lot includes pesticides (DDD, DDE, DDT, and historical presence of some organophosphate insecticides).

The total area of the site is about 37.7 acres, of which 2.4 acres is the unpaved vacant lot. Chemicals in soil are only available for possible direct contact and transport via dusts from the vacant lot. All other contaminated soils are covered by asphalt, concrete, or buildings. Because volatile organic chemicals are present in these covered areas, chemicals may volatilize up through the cover and be blown downwind. The nearest sensitive population, represented by an elementary school, is approximately one-half mile northeast of the site.

5.2 Water Pathways

Groundwater is encountered at a depth of approximately 60 feet bgs. The majority of the Site is covered by asphalt, concrete, or buildings, which act as a barrier to the percolation of surface waters.

5.2.1 Groundwater Pathways

Groundwater is approximately 60 feet bgs as measured in January 1997. Only TPH as diesel fuel (TPHD) and heavy oil were detected in groundwater; the toxic and volatile components of these mixtures (i.e., BTEX) were not detected in groundwater. The shallow aquifer in this area is not used for drinking water purposes. Because persons are not expected to directly contact groundwater and no volatile toxic constituents were detected, no exposure pathways are complete for groundwater. Because no toxic chemicals have been detected in groundwater, groundwater does not appear to be acting as a transport mechanism for chemicals beneath the site.

5.2.2 Surface Water Pathways

The nearest surface water body is Los Gatos Creek, located approximately 2 miles southeast of the site. Based on the distance to surface water bodies and the lack of toxic constituents detected in groundwater, no complete surface water exposure pathways are identified.

The site receives about 15 inches of rain annually. The majority of the site is covered with asphalt, concrete, or buildings. Therefore, surface water runoff that has the potential to come in contact with site chemicals is expected to be very limited at this site.

5.3 Air Pathways

Air sampling was not performed as part of this PEA. The prevailing wind direction is from the west. Residences are located about 500 feet downwind and exposure by blowing dust or volatile emissions may represent a complete exposure pathway. The inhalation of dusts and volatile emissions are discussed further in Section 7.2.

6 SAMPLING ACTIVITIES AND RESULTS

This section describes the soil and groundwater sampling activities and provides a discussion of the results. The sampling was conducted in December 1996 and January 1997.

6.1 Summary of Activities

This section discusses the sampling rationale, procedures for hand augering and soil sampling, monitoring well installation, groundwater sampling, surveying, and describes the laboratory analyses performed on the samples. Before field activities, EMCON obtained well installation permits (Appendix A) and prepared a site-specific health and safety plan. In addition, EMCON contracted with a private utility locator and notified underground services alert (USA) to clear the drilling locations.

6.1.1 Sampling Rationale

During the field investigation, EMCON performed soil and groundwater sampling to address the extent of subsurface impact, if any, at the following areas:

- Eastern unpaved portion of the Site used for previous agricultural operations where EMCON hand-augered and collected soil samples from borings EB-7 through EB-10.
- Former USTs area at Courtesy Chevrolet where EMCON collected soil and groundwater samples from well MW-1.
- Former dry cleaning operation in unit #906 where EMCON collected soil samples borings EB-1 and EB-2 and collected soil and groundwater samples from well MW-3.
- Site storage area where EMCON collected soil samples from boring EB-6 and collected soil and groundwater samples from well MW-2.

In addition to the areas described above, EMCON collected soil samples from borings EB-3 through EB-5 from various portions of the Site to determine the presence of pesticides from previous agricultural operations.

The hand-auger borings were placed in areas with the greatest potential for surficial impact. Likewise, the monitoring wells were located downgradient of areas with recognized environmental conditions with the potential for impacting groundwater. Analytical methods were chosen to detect known or potential sources of impact based on historical information and data collected during EMCON's Site reconnaissance and tenant inspections.

Potential sources of environmental impact identified during the inspection at Courtesy Chevrolet include the drain lines, an oil water separator, hydraulic lifts, waste coolant and waste oil ASTs, an oil AST enclosure, and a service bay with a sunken floor and floor staining. These potential sources of impact were not addressed at this time because Courtesy Chevrolet is still in operation and use of the property is not expected to change in the near future. These issues will be addressed when the lease expires at Courtesy Chevrolet.

6.1.2 Hand Augering and Soil Sampling

On December 17, 18, and 19 1996, EMCON collected soil samples from 10 borings, EB-1 though EB-10 (Figure 2). The borings were drilled to depths between 3 and 3.5 feet bgs using a manually operated, 3-inch diameter hand auger. Soil samples were collected in brass tubes at depths of 1 to 1.5 feet and 3 to 3.5 feet bgs using a sampling shoe and a sliding hammer. The brass tubes were covered at each end with Teflon® squares and capped with plastic end caps prior to transport to the laboratory. Borings EB-8 and EB-9 were drilled where fill material was brought in and spread on the eastern half of the vacant lot. To allow for the additional fill material which was approximately 6 inches in depth, samples from these borings were collected at depths of approximately 1.5 to 2 feet and 3.5 to 4 feet bgs. Upon completion of sampling, the hand-auger borings were backfilled to the surface with soil cuttings. In concrete or asphalt paved areas, the boreholes were capped with Portland cement.

The hand-auger and sampling shoe were washed in liquinox and double rinsed in water to prevent cross contamination between the boreholes. The decontamination water was temporarily stored on site in 55-gallon drums.

6.1.3 Monitoring Well Installation

On December 18, 19, and 20, 1996, EMCON drilled three borings (MW-1 through MW-3) ranging in depth from 71.5 to 75 feet bgs for the installation of monitoring wells (Figure 2).

The borings were drilled using hollow-stem auger drilling equipment using 8-inch diameter augers. The borings were sampled for laboratory analysis and lithologic description at approximate 5-foot depth intervals using a modified California split-spoon sampler and a standard penetrometer. The borings were completed as groundwater monitoring wells by installing 2-inch diameter PVC well casing and screen. The exploratory boring logs and well construction details are included in Appendix B.

A photoionization detector (PID) was used to perform field headspace readings for volatile compounds on soil samples from well boring MW-1. No volatile compounds were measured in any of the soil samples from the MW-1 boring, as indicated by the PID readings recorded on the boring log.

Drilling and sampling equipment was steam-cleaned prior to each use. Drill cuttings and decontamination water was temporarily stored on site in 55-gallon drums.

6.1.4 Groundwater Sampling

On December 20 and 31, 1996, EMCON developed and purged the wells by surging and bailing approximately 20 gallons from each. Groundwater samples were collected from each well using a Teflon bailer. Purging and sampling equipment was steam-cleaned between wells to prevent cross contamination. The purge and decontamination water was temporarily stored on site in 55-gallon drums. On January 7, 1997, depth to groundwater was measured in each well to determine the groundwater gradient. Well development field data sheets from the groundwater sampling and measuring events are presented in Appendix C.

6.1.5 Surveying

On January 3, 1997, the elevations of the well casings and adjacent ground surface were surveyed. The benchmark used was City of San Jose #641-B (129.50 feet above mean sea level). The survey elevation data is presented Table 2.

6.1.6 Laboratory Analyses

Tables 3 and 4 present a list of samples analyzed during the recent investigation, including the sample depth and analytical parameters. The following describes the analytical methods utilized for the various samples.

The soil samples from hand-auger borings EB-1 and EB-2 were analyzed for chlorinated volatile organic compounds (VOCs) using U.S. Environmental Protection Agency (USEPA) method 8010. Soil samples from hand-auger borings EB-3 through EB-10, well boring MW-2, and the shallow sample from well boring MW-3 were analyzed for pesticides using USEPA method 8080, and lead and arsenic using USEPA method 6010 and 7060. The samples from hand-auger boring EB-6 were additionally analyzed for total petroleum hydrocarbons as gasoline (TPHG) using USEPA method 8015; benzene, toluene, ethylbenzene, xylenes (BTEX), and methyl-tert butyl ether (MTBE) using USEPA method 8020; total petroleum hydrocarbons as diesel (TPHD) using USEPA method 8015; and high-boiling point hydrocarbons (HBHCs) using USEPA method 8015. The deeper soil sample from well boring MW-3, collected at 58.5 to 60 feet bgs, was analyzed for VOCs. Soil samples from boring MW-1 were analyzed for TPHG, BTEX, TPHD, and MTBE.

Some soil samples were further characterized by analyzing for soluble levels of metals by the waste extraction test (WET) outlined in California Code of Regulations, Title 22. These samples and the results of the WET analyses are shown on Table 3.

The groundwater samples from the wells were analyzed for TPHG, BTEX, TPHD, pesticides, and VOCs. The sample from MW-1 was additionally analyzed for MTBE. Laboratory analytical results and chain-of-custody documentation for the soil samples are presented in Appendix D and groundwater samples are included in Appendix E.

6.2 Discussion of Results

This section presents the subsurface conditions as recorded in the field by EMCON and discusses the results of the soil and groundwater analyses.

6.2.1 Subsurface Conditions

Soil observed during drilling consisted of interbedded units of clay, silt, sand, and gravel as shown on the boring logs presented in Appendix B. Groundwater was encountered in the coarser grained sands and gravels at a depth of approximately 60 feet bgs. The groundwater flows toward the northwest at an approximate gradient of 0.002 foot per foot (ft/ft). Groundwater elevation data is presented in Table 2 and the groundwater contours and flow direction are presented in Figure 4.

6.2.2 Soil Sample Analytical Results

To characterize soil conditions underlying the site, 26 soil samples were analyzed from 13 soil and well borings. A summary of the soil analytical results from this investigation is presented in Table 3 and Figure 2. Results from previous investigation are presented in Table 1 and Figure 3.

Based on the laboratory analysis, TPHG, BTEX, MTBE, TPHD, and HBHCs were not detected in the soil samples collected by EMCON. However, VOCs, pesticides, arsenic, and lead were detected consistent with previous investigations. These analytes are the result of the former dry cleaning and agricultural operations.

Former Dry Cleaning Operation

Low concentrations of PCE were detected in all four soil samples collected from borings EB-1 and EB-2, within the former dry cleaners. The concentrations ranged from 0.07 to 0.31 mg/kg, and were consistent with the concentrations detected in the soil samples collected in the March 1995 investigation by AllWest. No other VOCs were detected.

Former Agricultural Operations

Pesticides were detected in soil samples from six of the 10 borings analyzed. The pesticide compounds detected included 4,4'-DDE, 4,4'-DDD, and 4-4'-DDT. Individual sample results for total pesticides ranged from 0.03 mg/kg (EB-7 at 1 foot) to 10.6 mg/kg (EB-9 at 1.5 feet). Samples with total pesticide concentrations exceeding 1 mg/kg were detected in borings EB-5, EB-8, EB-9, and EB-10. These borings, except boring B-5, are located on the unpaved vacant lot on the eastern side of the Site. Boring B-5 is located nearby, on the southeastern edge of the property. These pesticide concentrations are consistent with concentrations detected during previous investigations which ranged from 0.03 to 15.4 mg/kg.

Arsenic and lead were detected in six of the ten samples analyzed. The arsenic concentrations ranged from 25 to 860 mg/kg and the lead concentrations ranged from 6 to 1,500 mg/kg. The highest concentrations for both arsenic (860 mg/kg) and lead (1,500 mg/kg) were detected in the sample from boring EB-5 at 3 feet bgs. This sample exceeded the total threshold limit concentrations (TTLC) for arsenic (500 mg/kg) and lead (1,000 mg/kg) which classifies this sample as hazardous waste if it is excavated and removed from the Site.

Those samples which exceeded 10 times the soluble threshold limit concentration (STLC) for arsenic (5 mg/kg) or lead (5 mg/kg) were also analyzed by the WET to determine the amount of soluble arsenic or lead. Only sample EB-9 at 1.5 feet, which had a concentration of 5.5 mg/kg for lead, exceeded the STLC for arsenic or lead.

6.2.3 Groundwater Impact

Groundwater samples were collected from wells MW-1, MW-2, and MW-3 during this investigation. A summary of the analytical parameters the samples were tested for and the results are presented in Table 3 and Figure 3.

Based on the laboratory analysis, TPHG, BTEX, MTBE, pesticides, and VOCs were not detected in the groundwater samples. TPHD was detected at low concentrations in the groundwater sample from MW-2 (200 ug/L), and low concentrations of heavy oil were detected in the groundwater samples from MW-2 (670 ug/L) and MW-3 (190 ug/L). Although the TPHD detected in MW-2 did not match the typical diesel fingerprint, it is possible the TPHD represents a highly weathered diesel. The source of the low concentrations of diesel and heavy oil in wells MW-2 and MW-3 is not known.

7 HUMAN HEALTH SCREENING EVALUATION

This section focuses on estimating the potential threat to public health posed by recognized environmental conditions at the Site. The purpose of the human health screening evaluation (HHSE) is to assist in assessing the need for and extent of site remediation to protect human health. The PEA guidance provides generic, non-site-specific estimates of exposure intended to be a health-conservative preliminary evaluation of potential risk and hazard.

Consistent with the PEA guidance, the HHSE is divided into the following four components:

- Exposure pathways and media of concern
- Exposure concentrations and chemicals
- Toxicity values
- Risk characterization summary.

In the first component, complete and potentially significant exposure pathways by which receptors could contact chemicals are identified, and the environmental media associated with these pathways (e.g., soil) are identified. For this site, this involves identifying pathways by which future on-site residents may be exposed to chemicals originating in soil.

In the second component, the chemicals present in media that are to be evaluated in the HHSE are identified, and exposure concentrations are estimated. For this site, this includes detected pesticides, arsenic, lead, BTEX, and PCE. Some exposure pathways directly use detected soil concentrations (e.g., direct contact with soil) while other pathways are based on models using detected soil concentrations (e.g., inhalation of volatile chemicals in air).

The third component, toxicity assessment, discusses the sources and values to be used to quantify the toxicity associated with different exposure routes (e.g., ingestion and inhalation). For this site, all evaluated chemicals have toxicity values available from either Cal-EPA or USEPA.

The final component compares the estimated exposure levels with toxicity values to provide an estimate of cancer risk and noncancer hazards from detected chemicals. Cancer risks and noncancer hazard quotients (HQs) are compared with target risks and HQs to identify if estimated risks and hazards are above or below target levels. If chemical concentrations are above target risk levels, mitigation measures may be required. For industrial/commercial sites, cancer risks as high as 1×10^{-5} may be acceptable to DTSC. For residential sites, cancer risks of 1×10^{-6} are considered acceptable by DTSC. This site is currently industrial/commercial, but a portion of the site may be used for residences in the future.

7.1 Exposure Pathways and Media of Concern

This section summarizes the receptors and potential exposure routes and pathways quantitatively evaluated in the HHSE. The USEPA describes exposure pathways in terms of four components (USEPA 1989):

- A source and mechanism of chemical release
- A retention or transport medium (or media)
- A point of potential contact by a receptor
- An exposure route at the exposure point.

All four of these components must be present for a potential exposure pathway to be considered complete and for exposure to occur. These components are discussed below.

7.1.1 Conceptual Site Model

Based on known historical site use, the source of pesticides and metals at the site is shallow soil. For VOCs, the source is subsurface soils beneath cover or buildings. Three possible release mechanisms are present for the chemicals detected in soil:

- wind erosion and/or invasive soil activities generating airborne dusts (relevant for pesticides and metals)
- volatilization of chemicals into ambient air (relevant for VOCs)
- leaching of chemicals to groundwater (relevant to all chemicals).

Potential secondary sources by which exposure could occur include fruits and vegetables grown in on site gardens in the future followed by subsequent ingestion. Because of the low water solubilities of the evaluated chemicals, uptake into fruits and vegetables likely represents only a minor pathway and is not quantified herein. Even though organochloride pesticides are known to biomagnify, this occurs primarily through ingestion of animals rather than plants. Based on the low detected pesticide concentrations and experience with other sites, the plant uptake pathways are expected to represent an insignificant degree of exposure. Therefore, these pathways are not evaluated in the HHSE.

7.1.2 Pathways

Pathways relevant to the conceptual site model discussed above include:

- Inhalation of dusts
- Inhalation of volatiles
- Ingestion of soil
- Dermal contact with soil
- Domestic use of groundwater.

Organochloride pesticides have low volatilities, but sorb strongly to soil. Inhalation of dusts is likely to represent essentially all exposure through the inhalation route. Therefore, inhalation of dusts is quantified herein but inhalation of volatiles is not. Metals are not volatile; therefore inhalation exposures are quantified only for dusts. The VOCs (BTEX and PCE) have high volatilities and sorb poorly to soil. Therefore, inhalation of volatiles is likely to represent essentially all exposure through the inhalation route. For the VOCs, inhalation of volatiles is quantified herein but inhalation of dusts is not.

Ingestion of and dermal contact with soil are both quantified herein for exposure to pesticides and metals. VOCs in soil are not available for direct contact because they are present beneath pavement or buildings. Therefore, these pathways are not relevant for VOCs. However, to be conservative and consistent with PEA guidance, exposure to VOCs via these pathways is quantified. Because no toxic components have been detected in groundwater, exposures and risks from possible domestic use of groundwater are not quantified. This pathway is further discussed in Section 7.2.2 below.

No surface water is present on or near the site, so no pathways involving surface water are evaluated in this HHSE.

7.1.3 Receptors

Based on proposed future land use, receptors possibly exposed to the detected chemicals include future on site residents. As stated by California (1994), the PEA evaluation is intended to "...*quantify the potential residential lifetime risk and hazard from site conditions for a defined set of exposure pathways*". Because other receptors typically have lower exposures than those estimated for residents, no other receptors are quantitatively evaluated in this HHSE.

7.2 Exposure Concentrations and Chemicals

Chemicals quantitatively evaluated in the HHSE include all detected pesticides and VOCs. For pesticides, exposure concentrations were used for the following pathways:

- Ingestion of soil by on-site future residents
- Dermal contact with soil by on-site future residents
- Inhalation of dusts by on-site future residents.

For VOCs, exposure concentrations were used for the following pathways:

- Ingestion of soil by on-site future residents
- Dermal contact with soil by on-site future residents
- Outdoor inhalation of volatiles by on-site future residents.

Exposure concentrations and methods used to calculate them are discussed below.

7.2.1 Soil

As prescribed in the PEA guidance, the maximum detected concentrations were used in the HHSE to represent the highest potential exposure for possible residential receptors. Even though maximum detected concentrations were found in different locations for different chemicals, simultaneous exposure to the maximum concentration of all chemicals was assumed for this HHSE. As shown on Table 3, the maximum organochloride pesticide concentrations were found in sample EB-9 at 1.5 feet bgs (for DDD and DDE), and sample EB-8 at 3.5 feet bgs for DDT. The maximum detected concentrations at these locations were 1.1 milligrams per kilogram (mg/kg) for DDD, 7.5 mg/kg for DDE, and 4.9 mg/kg for DDT.

Other pesticides were detected in 1985 by Woodward-Clyde, as reported by Allwest (1993). These detected pesticides included the following:

- DEF
- ethion
- trithion
- dinoseb
- 2,4-D
- 2,4,5-trichloropropane
- methiocarb
- chloropropham.

All detected concentrations for these pesticides were equal to or less than 1 mg/kg except for chloropropham, which had a maximum detected concentration of 22 mg/kg. These pesticides do not persist as long as organochloride pesticides such as DDT. In general, these other pesticides have environmental soil half-lives less than one year (Verschueren 1983). Since these concentrations were detected 12 years ago, they are not expected to be currently present at concentrations above the detection limit. However, chloropropham was conservatively included in this HHSE because it was detected at the highest concentration of these other pesticides (22 mg/kg) and may still be present near its detection limit.

For VOCs, the maximum detected concentrations of BTEX remaining in subsurface soil at Courtesy Chevrolet following UST removal were used as exposure concentrations for soil contact and for volatilization modeling. The maximum concentrations of 0.084, 0.1, 0.16, and 0.37 mg/kg for BTEX, respectively, were detected in overexcavation sample T1-W2 at approximately 10 feet bgs in 1994 (AllWest 1994). For PCE, the maximum detected soil concentration of 0.31 mg/kg at location EB-1 at 3 feet bgs was used.

For arsenic and lead, both total and waste extraction test (WET) data are available. Both of these metals sorb to soil and also naturally occur in soil. Only a portion of these metals are bioavailable due to their form in the soil and their physical-chemical properties. The WET data represents the soluble concentrations of these metals at a pH similar to that of stomach acid. Therefore, the WET data represent the most appropriate source concentrations to estimate exposures and doses to human receptors. For arsenic, WET analyses were conducted on 13 soil samples. All WET results were non-detect at a detection limit of 0.5 mg/kg. The maximum total arsenic concentration of these 13 samples was 470 mg/kg. If one conservatively assumes that the WET result for this sample is at the detection limit, this indicates that the ratio between WET and total arsenic levels is 0.001 (0.5/470). The maximum total arsenic concentration detected was 860 mg/kg. This sample was detected at location EB-5 at 3 feet bgs, in the southern end of the site beneath pavement. Although no WET analysis was conducted on this sample, a WET result can be estimated using the conservative ratio calculated above. The WET value resulting from this ratio is 0.9 mg/kg. This maximum estimated WET value is used in this HHSE to represent a bioavailable concentration for exposure. It should be noted that all other detected arsenic concentrations were more than 10 times less than this maximum value, indicating that soluble levels of arsenic should be less than 0.09 mg/kg across the site.

For lead, the maximum total concentration of 1,500 was also detected at location EB-5 at 3 feet bgs. Although a WET test was not performed for this sample, total and WET data were analyzed for six detected lead samples. For the four samples where both results were above detection limits, the average ratio between WET and total concentrations was 0.0275. All individual ratios for a given sample location were within a factor of two, indicating that ratios could be extrapolated to other sample results. Multiplying the maximum total lead concentration of 1,500 mg/kg by this ratio of 0.0275 corresponds to a WET result of 41 mg/kg. This concentration is used in the HHSE for lead.

7.2.1.1 Soil Ingestion and Dermal Contact with Soil

For ingestion of and dermal contact with soil, the detected concentrations were used directly as exposure concentrations. These measured concentrations were combined with intake assumptions provided in PEA guidance to quantify exposures via these pathways. Intake assumptions for soil ingestion and dermal contact were combined with the soil concentrations using the relevant portions of the equation shown in Figure 5, Appendix B of the PEA guidance to estimate doses for each of the evaluated chemicals, as shown on Tables 5 and 6 for ingestion and dermal contact, respectively. These tables also show the actual equations used in the calculations. Different dermal absorption fractions were used for VOCs, organochloride pesticides, and arsenic as provided in PEA guidance and shown on Table 6.

7.2.1.2 Inhalation of Dusts

For inhalation of dusts originating in soil, the detected concentrations in soil were multiplied by 0.05 mg/m^3, the National Ambient Air Quality Standard for the annual average respirable portion (PM_{10}) of suspended particulate matter, and then converted to units of kg/m^3, following PEA guidance, to estimate air concentrations for exposure. Resulting air concentrations are shown on Table 7, along with intake assumptions and exposure equations provided in the PEA guidance manual. Resulting daily doses from inhalation of dust exposure are also shown on this table.

7.2.1.3 Inhalation of Volatiles

For inhalation of volatile chemicals originating in soil, the detected concentrations in soil were input into a simple, infinite source model, following PEA guidance, to estimate air emission rates at the soil surface. The model used is presented in PEA guidance and is illustrated in Figure 2.5 of the PEA guidance manual. The calculated emission rates are then divided by 99 following PEA guidance to convert the emission rates to ambient air concentrations in the breathing zone above a theoretical residential lot in units of mg/m^3. Resulting air concentrations are shown on Table 8, along with intake assumptions and exposure equations provided in the PEA guidance manual. Resulting daily doses from inhalation of vapors also shown on this table.

7.2.2 Groundwater

As previously discussed, groundwater is not used as a drinking water aquifer. Because none of the detected soil chemicals have been detected in groundwater and no toxic components of the detected TPH mixtures were found in groundwater, no complete exposure pathways are indicated for groundwater.

7.3 Toxicity Values

Consistent with PEA guidance, cancer potency values for the detected pesticides were obtained from the Office of Environmental Health Hazard Assessment if available (OEHHA, 1994). For the evaluated chemicals that are considered potentially carcinogenic, these cancer potency values, or slope factors (SFs), are 0.34 mg/kg/day^{-1} for DDE and DDT, 0.24 mg/kg/day^{-1} for DDD, 0.10 mg/kg/day^{-1} for benzene. The SFs are the same for both oral and inhalation exposure routes for these chemicals. For arsenic and PCE, SFs are different for oral and inhalation exposure routes. For arsenic, respective SFs are 1.5 and 15 mg/kg/day^{-1} and for PCE, respective SFs are 0.051 and 0.021 mg/kg/day^{-1}. Ethylbenzene, toluene, xylenes, chloropropham, and lead are not considered carcinogenic and only reference doses are used for these chemicals (except for lead as discussed below).

For noncancer effects, chronic reference doses (RfDs) were obtained from the USEPA Integrated Risk Information System (IRIS) online database (USEPA, 1996), consistent with PEA guidelines. The chronic oral RfD available for DDT (0.0005 mg/kg/day) was also used to assess the noncancer effects of DDD and DDE because these two chemicals have similar structures to DDT but do not have available RfDs. This oral value was used for oral, dermal, and inhalation exposure routes consistent with PEA guidance. For ethylbenzene, oral and inhalation chronic reference doses are 0.1 and 0.29 mg/kg/day, respectively. For toluene, oral and inhalation chronic reference doses are 0.2 and 0.11 mg/kg/day, respectively. For xylenes, oral and inhalation chronic reference doses are 2 and 0.2 mg/kg/day, respectively. The same RfD is used for all exposure routes for arsenic and chloropropham. These values are 0.0003 and 0.2 for arsenic and chloropropham, respectively.

Lead is evaluated differently from other chemicals. For screening purposes, PEA guidance uses a concentration of 130 mg/kg in soil below which exposures "constitute an acceptable human health risk" (California 1994). This value was obtained by the Office of Scientific Affairs using the spreadsheet model LEADSPREAD and conservative, screening level assumptions. Therefore, rather than estimating exposures to lead, site concentrations are directly compared with this screening value.

Toxicity values are presented for each pathway on Tables 5, 6, and 7.

7.4 Risk Characterization

This section presents the estimated risks from future on site residential exposure to the detected chemicals for the pathways discussed in Section 7.2. Noncancer hazards are discussed first, followed by cancer risks.

7.4.1 Noncancer Risk Characterization

For noncancer effects, a hazard quotient (HQ) is used to evaluate hazards. The HQ is calculated by dividing the estimated daily dose by the RfD. If this quotient is greater than 1, it indicates the presence of contamination which may pose a significant threat to human health under the evaluated conditions (California 1994). If this is less than 1, no further action is required to adequately protect human health from noncancer effects.

Noncancer effects were evaluated for DDD, DDE, DDT, chloropropham, arsenic, toluene, ethylbenzene, and xylenes. For soil ingestion, HQs ranged from 1.0×10^{-6} for toluene exposure by adults to 0.83 for arsenic exposure by children. For dermal contact with soil, HQs ranged from 1.0×10^{-6} for toluene exposure by adults to 0.19 for DDE exposure by children (Table 9). All values are less than the regulatory-based threshold level of 1. Summing HQs for each chemical across both routes of exposure provides a hazard index (HI), and provides a conservative evaluation of possible additive impacts from chemicals. The highest HI estimated for soil ingestion is 0.38 for children, which is below 1 (Table 9).

For the air pathways, HQ values ranged from 6.1×10^{-6} for toluene to 4.8×10^{-4} for DDE (Table 9). The sum of HQs for the dust and volatilization pathways are 0.00096 and 0.00046, which are much less than 1.

The total HIs across all pathways are 0.57 and 0.075 for children and adult receptors, respectively, which are both below the threshold level of 1. These results indicate that noncancer effects are not of concern under the conditions evaluated in this HHSE.

7.4.2 Cancer Risk Characterization

Cancer effects are evaluated by multiplying the average daily doses estimated in the exposure assessment by the slope factor to calculate a cancer risk. As stated by California (1994), a risk estimation greater than 10^{-6} indicates "...the presence of contamination which may pose a significant threat to human health". Cancer risks were evaluated for DDD, DDE, DDT, arsenic, benzene, and PCE.

For direct soil ingestion, cancer risks ranged from 1.3×10^{-8} for benzene to 4×10^{-6} for DDE (Table 9). In addition to the estimated cancer risk from DDE exposure, the soil ingestion cancer risk estimated for DDT (3×10^{-6}) and arsenic (2×10^{-6}) slightly exceed the target level of 1×10^{-6} (Table 9). The sum of cancer risks for soil ingestion is 9.1×10^{-6}; 44 percent of this risk is due to DDE, 29 percent is due to DDT, and 23 percent is due to arsenic (Table 9).

For dermal contact with soil, cancer risks ranged from 1.6×10^{-8} for benzene to 2.4×10^{-6} for DDE (Table 9). In addition to the estimated cancer risk from arsenic exposure, the soil dermal contact cancer risk estimated for DDT (1.6×10^{-6}) slightly exceeds the target level of 1×10^{-6} (Table 9). The sum of cancer risks for dermal contact with soil is 5.0×10^{-6}; 48 percent of this risk is due to DDE and 31 percent is from DDT (Table 9).

For the air pathways, cancer risks ranged from 2.0×10^{-9} for DDD to 1×10^{-7} for arsenic (Table 9). The sum of the estimated cancer risks from inhalation of volatiles (e.g., HI) is below the 1×10^{-6} threshold value used by DTSC.

These results indicate that exposure to the maximum detected DDE and DDT concentrations may pose excess cancer risks above the acceptable regulatory risk level. In addition, cumulative exposure to arsenic across all pathways of 3×10^{-6} exceeded the 1×10^{-6} threshold (Table 9). All other detected arsenic concentrations were at least ten times lower the maximum value used, indicating that site-wide exposure to arsenic should result in exposures below threshold risk levels. Exposure to DDE and DDT are within the acceptable screening risk value range of 1×10^{-5} and 1×10^{-6}, indicating that they represent borderline risks based on this conservative screening risk evaluation.

7.5 Uncertainties

Risk estimates are values that have uncertainties associated with them. These uncertainties, which arise at every step of a risk assessment, are evaluated to provide an indication of the relative degree of uncertainty associated with a risk estimate. A detailed qualitative discussion of the uncertainties associated with the development of the risk estimates for the site is presented in Appendix F.

7.6 Conclusions

Noncancer effects were estimated to be below levels of potential concern for all chemicals across all pathways and receptors. For cancer effects, exposure to DDE and DDT at their maximum detected concentrations via soil ingestion and dermal contact with soil exceed the target 1×10^{-6} cancer risk. However, these exceedances were all less than 1×10^{-5}. Cumulative exposure to the maximum detected soil arsenic concentration also slightly exceeds the target 1×10^{-6} cancer risk level. All other exposures were less than levels of concern.

8 ECOLOGICAL SCREENING EVALUATION

This section describes the ecological community at and near the site and qualitatively evaluates the potential for biota to be exposed to chemicals originating in site soil.

8.1 Ecological Site Characterization

On January 6, 1997 the vacant lot at the site was surveyed to develop an inventory of plant animal species present or likely to be present at the site. Evidence was gathered by direct observation of the species visible and by noting the presence of signs of other species such as the remains of plants from a previous growing season, burrows, tracks, and scat. No species of special concern were noted in the survey. Based on the developed nature of the site, no other site areas were vegetated and therefore only the vacant lot may provide a habitat for ecological receptors.

8.1.1 Plants

The lot was completely vegetated except for a strip on its eastern quarter that was separated from the rest of the site by a wooden rail fence. This area appeared to be highly disturbed, as evidenced by the presence of tracks from heavy construction equipment. The spaces along the margins of this area, however, appeared to be relatively undisturbed, and supported vegetation similar to that of the rest of the lot. The absence of plant growth in the highly disturbed area is probably the result of the physical disturbance as well as the resulting compaction of the soil.

The site is strongly ruderal (i.e., disturbed) in nature, and supports a lush growth of weedy plants made up entirely of annual species. Grasses (primarily wild oats [*Avena* sp.] and rye grass [*Lolium* sp.]) dominate the site. A variety of herbaceous annuals were also observed. The herbs consisted of cheese weed (*Malva* sp.), cranesbill (*Erodium* sp) wild mustard (*Brassica* sp.), pigweed (*Chenopodium* sp.), and the occasional thistle (*Cirsium* sp.), dandelion (*Bellis* sp.) and miner's lettuce (*Montia* sp.).

8.1.2 Animals

Consistent with treeless ruderal habitats in the Bay Area, the lot is dominated by ground squirrels (*Citellus* sp.), which were observed throughout the vegetated portion of the site. No squirrels or their burrows were observed in the bare areas on the eastern part of the site. Burrows, probably made by smaller rodents such as field mice or voles, were also noted. No sign of other animals were observed, although it is possible that reptiles such as lizards or snakes may occupy this lot.

Although no birds appear to nest at the lot, probably as a result of the absence of suitable nesting sites, the site may serve as a source of food for birds of prey. The contribution to the diet of such birds, however, is likely to be very small considering the small size of this site relative to the hunting area for birds of prey.

The lot is not likely to contain many animals other than those mentioned above because of its small size and the fact that it is surrounded by areas that have been or are being developed for commercial or residential use.

Therefore, the only habitat at the site should be considered a highly disturbed habitat strongly influenced by human industrial activities.

8.2 Biological Characterization

Because the only habitat currently present on site is a highly disturbed open field, no viable, undisturbed ecological communities are present on or near the site. No sensitive habitats are present near the site, including wetlands or riparian areas.

As recommended by PEA guidance, a search of the California Department of Fish and Game's (CDFG) California Natural Diversity Database (CNDDB) was conducted for the west San Jose US Geological Survey quadrangle to identify if any special status species have been reported in the vicinity of the site. Special status species include California species of special concern, state and federally listed rare, threatened, or endangered species, or species which are proposed or recommended for state or federal listing.

Results of the search indicated that four observations of special status species have been reported in the western San Jose quadrangle:

- burrowing owl (Athene cunicularia) at Karina Court and North First Street in 1992
- burrowing owl 0.2 miles northeast of the intersection of Airport Parkway and Guadalupe Parkway, east of San Jose International Airport, in 1993

- hairless popcorn-flower (Plagiobothrys glaber) in Santa Clara, reported occurrence in 1892
- metcalf canyon jewelflower (Streptanthus albidus ssp. albidus) four miles south of San Jose near Canoas Creek, reported occurrence in 1938.

All four of these locations are further than 2 miles from the site. Therefore, no special status species have been observed in the vicinity of the site.

8.3 Pathway Assessment

As discussed in Section 7.1, each of four components of an exposure pathway needs to be present for a pathway to be potentially complete. Because no viable undisturbed ecological habitats or special status species currently reside at or near the site, one of the four components required for a complete exposure pathway is not present for species other than the opportunistic, tolerant species currently on the site. The observed species in the vacant lot have a high tolerance for human disturbance; their presence at the lot indicates that plants and animals have become established at the site in spite of the minor chemical contamination. Therefore, it should be expected that the currently present species are not at undue risk from chemical exposure. As previously discussed, although the site may serve as a source of food for birds of prey, the contribution to the diet of such birds is likely to be very small and should not present an undue risk for predatory birds.

8.4 Qualitative Summary

Because of the nature and physical status of the site, only a highly disturbed habitat dominated by weedy species and ground squirrels is present on site; this habitat occupies less than ten percent of the site area. No habitats for ecological receptors are present across the rest of this paved and developed site. No special status species have been reported to be present within two miles of the site. Based on this qualitative assessment, risks to biota are expected to be minimal at the site.

9 COMMUNITY PROFILE

The community surrounding the Site is zoned for commercial and residential uses. Commercial developments are present to the north, south, and west of the Site. Residential housing borders the Site to the northeast and the property to the east is currently under development for single family housing. The nearest school, Saint Martins, is approximately 0.5 mile northeast of the Site.

The property that is east of the Site, currently being developed for single-family housing, was purchased by a property developer in the mid-1990s. The developer of the residential units obtained a Negative Declaration under the California Environmental Quality Act (CEQA) issued by the San Jose Department of City Planning prior to developing the property. In the past, the residential property had been used for agricultural purposes. Previous investigations detected pesticides in soils similar to those detected in the soil at the unpaved vacant lot on the TCVSC Site. The Negative Declaration found no significant impact on the environment from the project and no protests or comments were received from the public concerning environmental conditions at the residential site.

10 CONCLUSIONS AND RECOMMENDATIONS

10.1 Conclusions

Several areas at the Site have recognized environmental conditions that represent past releases of chemical compounds. These compounds are found primarily in shallow soils and include pesticides, arsenic, lead, PCE, and petroleum hydrocarbons. The pesticides are from past agricultural use at the Site. Arsenic and lead are also likely the result of past agricultural use. The PCE is from a former dry cleaner and the petroleum hydrocarbons are from former USTs at Courtesy Chevrolet. The compounds found in the soil are not detected in groundwater at the Site. However, groundwater collected at the Site shows low concentrations of heavy oil or diesel, but the groundwater does not contain any toxic compounds.

The inspection and the interviews at the Site indicated that small quantities of chemicals are stored and used by various tenants. The inspections and interviews did not indicate that further investigations are necessary in these areas, which include the Storage Area and Workshop. However, during the inspection several open drums and buckets which contained liquids and three drums containing soils, were found in the Site storage area. These drums and buckets should be removed.

Under continued commercial use, the risk assessment demonstrates that the compounds found at the Site do not pose a threat to public health or the environment above the risk-based levels. The health risks of the chemical compounds found at the Site were evaluated for residential exposure. Under a residential scenario, the potential exposure to pesticides (specifically DDE and DDT) and arsenic exceed the target cancer risk for these compounds. The other compounds, specifically PCE, lead, and petroleum hydrocarbons, do not exceed the target cancer risk level.

The Site inspection and interviews at the Site indicated several recognized environmental conditions at Courtesy Chevrolet, which were not sampled during this investigation. It is EMCON's understanding that these areas will be investigated by Courtesy Chevrolet when their lease expires on the property.

10.2 Recommendations

As previously stated, the recognized environmental conditions found at the site do not pose a significant threat to the public health or the environment, provided the use of the Site does not change. However, if the use of the site changes and residential development is considered at the Site, we recommend further investigation of the following recognized environmental conditions.

- The soils containing pesticide residues found in the vacant lot require remediation prior to residential development. Remedial alternatives should be considered in conjunction with any proposed development plan and the alternatives should be designed to limit exposure to pesticide soils. The remedial alternatives may incorporate excavation or capping the site.
- The extent of lead-impacted soil in the southern portion of the site should be defined and the soil remediated, if the asphalt in this area is to be removed and the soils are exposed during future construction. The remediation alternatives should be designed to remove any soils above established regulatory criteria.
- The recognized environmental conditions at Courtesy Chevrolet should be investigated to determine whether any soil impacts have occurred in this area.
- The drums and buckets of liquid and the drums of soil in the Site storage area should be identified and appropriately contained or disposed.

REFERENCES

AllWest, August 2, 1993. *Soil Investigation Report, Town and Country Village Shopping Center, Stephens Creek and Winchester Boulevards, San Jose, California.* AllWest Environmental, Inc., San Francisco, California.

AllWest, June 14, 1994. *Environmental Audit, Courtesy Chevrolet, 3030 Stevens Creek Boulevard, San Jose, California.* AllWest Environmental, Inc., San Francisco, California.

AllWest, June 29, 1994. *Underground Storage Tanks Closure Report, Courtesy Chevrolet, 3030 Stevens Creek Boulevard, San Jose, California.* AllWest Environmental, Inc., San Francisco, California.

AllWest, November 28, 1994. *Subsurface Investigation Report, Courtesy Chevrolet, 3030 Stevens Creek Boulevard, San Jose, California.* AllWest Environmental, Inc., San Francisco, California.

AllWest, March 27, 1995. *Subsurface Investigation Report, Former Dry Cleaner Facility, Tenant Space #906, Town and Country Shopping Mall, Winchester and Stevens Creek Boulevards, San Jose, California.* AllWest Environmental, Inc., San Francisco, California.

AllWest, September 12, 1996. *Environmental Site Assessment, Town & Country Village Shopping Center, 2980 - 3030 Stevens Creek Boulevard, San Jose, California.* AllWest Environmental, Inc., San Francisco, California.

DTSC, January 1994. *Preliminary Endangerment Assessment Guidance Manual.* State of California, Environmental Protection Agency, Department of Toxic Substances Control, Sacramento, California.

ICES, October 26, 1995. *Remedial Activities, Town & Country Residential Parcel, San Jose, California.* Innovative & Creative Environmental Solutions, Berkeley, California.

Office of Health Hazard Assessment (OEHHA), 1994. California Potency Factors: Update. Memorandum from Standards and Criteria Work Group to Cal/EPA

Departments, Boards, and Office. California Environmental Protection Agency. November 1.

SCVWD, November 18, 1996. *Underground Storage Tank Case Closure - Courtesy Chevrolet, 3030 Stevens Creek Boulevard, San Jose, CA 95128; Case No. 14-059.* Santa Clara Valley Water District, San Jose, California.

U.S. Environmental Protection Agency (USEPA), 1989. Risk assessment guidance for Superfund; human health evaluation manual (part A). Office of Emergency and Remedial Response, Washington, D.C., EPA/540/1-89/002. December.

U.S. Environmental Protection Agency (USEPA), 1991. Current Regulatory Issues in Risk Assessment and Risk Management. Executive Office of the President. Government Printing Office, Washington, DC. S/N 041-001-00354-1.

U.S. Environmental Protection Agency (USEPA), 1992. Dermal Exposure Assessment: Principles and Applications. Interim Report. Office of Research and Development, Washington, D.C. EPA/600/8-91/011B. January.

U.S. Environmental Protection Agency (USEPA), 1996a. Integrated Risk Information System. Online database.

U.S. Environmental Protection Agency (USEPA), 1996b. Proposed Guidelines for Carcinogen Risk Assessment. EPA/600/P-92/003C. April 16.

Verschueren, K. 1983. Handbook of environmental data on organic chemicals. Second edition. Van Nostrand Reinhold, New York.

WCC, August 13, 1985. *Findings of the Environmental inspection Conducted at Town & Country Shopping Center, San Jose, California.* Woodward-Clyde Consultants, Walnut Creek, California.

LIMITATIONS

The services described in this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with our client. This report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, nor the use of segregated portions of this report.

Table 1

Summary of Soil Analytical Results From Previous Investigations
Federal Realty Investment Trust
2980-3030 Stevens Creek Boulevard, San Jose, California

Units: mg/kg

Borehole Designation	Sample Depth (ft.)	Date Sampled	TPHG	B	T	E	X	TPHD	Total Chlorinated Pesticides	PCE*	Arsenic	Lead
AGRICULTURAL AREA BORINGS												
TCG-1	0.5	07/23/85	NA	NA	NA	NA	NA	NA	5.88	NA	60	NA
TCG-2	0.5	07/23/85	NA	NA	NA	NA	NA	NA	2.80	NA	59	NA
TCG-3	0.5	07/23/85	NA	NA	NA	NA	NA	NA	6.86	NA	85	NA
TCSS-1	1.0	12/21/92	NA	NA	NA	NA	NA	NA	11.7	NA	0.35	NA
TCSS-2	1.5	12/21/92	NA	NA	NA	NA	NA	NA	4.7	NA	0.11	NA
TCSS-3	1-1.5	12/21/92	NA	NA	NA	NA	NA	NA	4.3	NA	0.25	NA
TCSS-4	1-1.5	12/21/92	NA	NA	NA	NA	NA	NA	5.2	NA	0.44	NA
TCSS-5	1-1.5	12/21/92	NA	NA	NA	NA	NA	NA	15.4	NA	0.20	NA
TCSS-6	1-1.5	12/21/92	NA	NA	NA	NA	NA	NA	2.0	NA	0.13	NA
TCSS-7	1-1.5	12/21/92	NA	NA	NA	NA	NA	NA	3.1	NA	0.19	NA
SS-1	2-2.5	06/10/93	NA	NA	NA	NA	NA	NA	4.50	NA	NA	NA
SS-2	0.5-1	06/10/93	NA	NA	NA	NA	NA	NA	4.65	NA	NA	NA
SS-3	0.5-1	06/10/93	NA	NA	NA	NA	NA	NA	0.22	NA	NA	NA
SS-4	0.5-1	06/10/93	NA	NA	NA	NA	NA	NA	3.64	NA	NA	NA
SS-5	0.5-1	06/10/93	NA	NA	NA	NA	NA	NA	5.19	NA	NA	NA
SS-6	0.5-1	06/10/93	NA	NA	NA	NA	NA	NA	1.89	NA	NA	NA
SS-7	1-1.5	06/10/93	NA	NA	NA	NA	NA	NA	3.79	NA	NA	NA
SS-8	0.5-1	06/10/93	NA	NA	NA	NA	NA	NA	2.57	NA	NA	NA

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Table 1

Summary of Soil Analytical Results From Previous Investigations
Federal Realty Investment Trust
2980-3030 Stevens Creek Boulevard, San Jose, California

Units: mg/kg

Borehole Designation	Sample Depth (ft.)	Date Sampled	TPHG	B	T	E	X	TPHD	Total Chlorinated Pesticides	PCE*	Arsenic	Lead
SS-9	1-1.5	06/10/93	NA	NA	NA	NA	NA	NA	2.29	NA	NA	NA
SS-10	0.5-1	06/10/93	NA	NA	NA	NA	NA	NA	1.55	NA	NA	NA
SS-11	1-1.5	06/10/93	NA	NA	NA	NA	NA	NA	1.69	NA	NA	NA
SS-12	0.5-1	06/10/93	NA	NA	NA	NA	NA	NA	4.60	NA	NA	NA
SS-13	1-1.5	06/10/93	NA	NA	NA	NA	NA	NA	1.70	NA	NA	NA
SS-14	2-2.5	06/10/93	NA	NA	NA	NA	NA	NA	0.06	NA	NA	NA
SS-15	0.5-1	06/10/93	NA	NA	NA	NA	NA	NA	3.91	NA	NA	NA
SS-16	0.5-1	06/10/93	NA	NA	NA	NA	NA	NA	1.11	NA	NA	NA
SS-17	0.5-1	06/10/93	NA	NA	NA	NA	NA	NA	2.84	NA	NA	NA
SS-18	0.5-1	06/10/93	NA	NA	NA	NA	NA	NA	3.02	NA	NA	NA
SS-19	0.5-1	06/10/93	NA	NA	NA	NA	NA	NA	3.34	NA	NA	NA
SS-20	0.5-1	06/10/93	NA	NA	NA	NA	NA	NA	1.46	NA	NA	NA
SS-21	1-1.5	06/10/93	NA	NA	NA	NA	NA	NA	0.37	NA	NA	NA
SS-22	1-1.5	06/10/93	NA	NA	NA	NA	NA	NA	0.05	NA	NA	NA
SS-23	1-1.5	06/10/93	NA	NA	NA	NA	NA	NA	0.03	NA	NA	NA
COURTESY CHEVROLET												
UST EXCAVATION CONFIRMATION SAMPLES												
T-3-E	11	03/30/94	NA	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	3.7
T-3-W	11	03/30/94	NA	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	5

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Table 1

Summary of Soil Analytical Results From Previous Investigations
Federal Realty Investment Trust
2980-3030 Stevens Creek Boulevard, San Jose, California

Units: mg/kg

Borehole Designation	Sample Depth (ft.)	Date Sampled	TPHG	B	T	E	X	TPHD	Total Chlorinated Pesticides	PCE*	Arsenic	Lead
T-4-E	11	03/30/94	<1.0	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA
T-4-W	11	03/30/94	<1.0	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA
SW-north	8	03/30/94	<1.0	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA
SW-south	8	03/30/94	<1.0	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA
SW-east	8	03/30/94	<1.0	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA
SW-west	8	03/30/94	<1.0	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA
T-1-E2	16	04/01/93	<1.0	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	13
T-1-W2	16	04/01/93	61	0.084	0.16	0.1	0.37	NA	NA	NA	NA	9.1
T-2-C2**	16	04/01/93	2.3	<0.005	0.022	0.019	0.077	<1.0	NA	<0.005	NA	9.8
SW-E2	16	04/01/93	1.4	<0.005	0.018	0.017	0.059	NA	NA	NA	NA	14
SW-S2	16	04/01/93	17	<0.005	0.019	0.034	0.16	NA	NA	NA	NA	91
UST BORINGS												
SB-1	11-12.5	11/08/94	<1.0	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA
	13.5-15	11/08/94	<1.0	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA
	38.5-40	11/08/94	<1.0	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA
SB-2	13.5-15	11/08/94	<1.0	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA
	18.5-20	11/08/94	<1.0	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA
	38.5-40	11/08/94	<1.0	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA
SB-3	18.5-20	11/09/94	<1.0	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA
	38.5-40	11/09/94	<1.0	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA

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Table 1

Summary of Soil Analytical Results From Previous Investigations
Federal Realty Investment Trust
2980-3030 Stevens Creek Boulevard, San Jose, California

Units: mg/kg

Borehole Designation	Sample Depth (ft.)	Date Sampled	TPHG	B	T	E	X	TPHD	Total Chlorinated Pesticides	PCE*	Arsenic	Lead
SB-4	8.5-10	11/09/94	<1.0	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA
	13.5-15	11/09/94	<1.0	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA
	33.5-35	11/09/94	<1.0	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA
	53.5-55	11/09/94	<1.0	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA
	58.5-60	11/09/94	<1.0	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA
FORMER DRY CLEANERS												
B-1	5	03/08/95	NA	NA	NA	NA	NA	NA	NA	0.031	NA	NA
	10	03/08/95	NA	NA	NA	NA	NA	NA	NA	0.018	NA	NA
B-2	5	03/08/95	NA	NA	NA	NA	NA	NA	NA	0.035	NA	NA
	10	03/08/95	NA	NA	NA	NA	NA	NA	NA	0.042	NA	NA
MWT-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TPHG	Total petroleum hydrocarbons as gasoline
B	Benzene
T	Toluene
E	Ethylbenzene
X	Xylenes
TPHD	Total petroleum hydrocarbons as diesel
PCE	Tetrachloroethene

(1) NA = not analyzed or available

(2) ND = not detected above method reporting limits in the certified laboratory reports.

(3) * = All other VOCs by EPA method 8010 below method reportin limits.

(4) ** = Sample contained 20 mg/kg oil and grease. Sample tested for semi-volatile organics. All analytes below the method reporting limits.

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Table 2

Groundwater Elevation Data
Federal Realty Investment Trust
2980-3030 Stevens Creek Boulevard, San Jose, California

Well Designation	Well Casing Elevation (ft/MSL)	Date Measured	Depth to Water (ft)	Water Level Elevation (ft/MSL)
MW-1	129.89	1/8/97	57.43	72.46
MW-2	132.70	1/8/97	58.71	73.99
MW-3	136.59	1/8/97	61.31	75.28

Notes:

1. Benchmark = City of San Jose #641-B, elevation of 129.50 MSL
2. MSL = mean sea level

Table 3

Summary of Soil Analytical Results
Federal Realty Investment Trust
2980-3030 Stevens Creek Boulevard, San Jose, California

Units: mg/kg

Borehole Designation	Sample Depth (ft.)	Date Sampled	TPHG	B	T	E	X	MTBE	TPHD	HBHCs	Total Chlorinated Pesticides	PCE*	Arsenic	Arsenic WET	Lead	Lead WET
SOIL BORINGS																
EB-1	1	12/17/96	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.12	NA	NA	NA	NA
	3	12/17/96	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.31	NA	NA	NA	NA
EB-2	1	12/17/96	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.07	NA	NA	NA	NA
	3	12/17/96	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.13	NA	NA	NA	NA
EB-3	1	12/17/96	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	73	<0.5	10	NA
	3	12/17/96	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	53	<0.5	10	NA
EB-4	1	12/17/96	NA	NA	NA	NA	NA	NA	NA	NA	0.24	NA	78	<0.5	12	NA
	3	12/17/96	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	46	NA	8	NA
EB-5	1	12/17/96	NA	NA	NA	NA	NA	NA	NA	NA	0.58	NA	60	<0.5	34	NA
	3	12/19/96	NA	NA	NA	NA	NA	NA	NA	NA	1.8	NA	860	NA	1,500	NA
EB-6	1	12/17/96	<1	<0.005	<0.005	<0.005	<0.005	<0.05	<1	ND	ND	<0.05	78	<0.5	11	NA
	3	12/17/96	<1	<0.005	<0.005	<0.005	<0.005	<0.05	<1	ND	ND	<0.05	34	NA	9	NA
EB-7	1	12/18/96	NA	NA	NA	NA	NA	NA	NA	NA	0.03	NA	59	<0.5	12	NA
	3	12/18/96	NA	NA	NA	NA	NA	NA	NA	NA	0.07	NA	53	<0.5	11	NA
EB-8	1.5	12/18/96	NA	NA	NA	NA	NA	NA	NA	NA	3.42	NA	82	<0.5	91	2.4
	3.5	12/18/96	NA	NA	NA	NA	NA	NA	NA	NA	10.4	NA	75	<0.5	110	2.2
EB-9	1.5	12/19/96	NA	NA	NA	NA	NA	NA	NA	NA	10.6	NA	90	<2	130	5.5
	3.5	12/19/96	NA	NA	NA	NA	NA	NA	NA	NA	0.63	NA	63	<0.5	24	0.5
EB-10	1	12/19/96	NA	NA	NA	NA	NA	NA	NA	NA	3.8	NA	110	NA	220	NA
	3	12/19/96	NA	NA	NA	NA	NA	NA	NA	NA	0.04	NA	61	NA	15	NA
WELL BORINGS																
MW-1	19.5	12/20/96	<1	<0.005	<0.005	<0.005	<0.005	<0.05	<1	NA	NA	NA	NA	NA	NA	NA
	30	12/20/96	<1	<0.005	<0.005	<0.005	<0.005	<0.05	<1	NA	NA	NA	NA	NA	NA	NA

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Table 3

Summary of Soil Analytical Results
Federal Realty Investment Trust
2980-3030 Stevens Creek Boulevard, San Jose, California

Units: mg/kg

Borehole Designation	Sample Depth (ft.)	Date Sampled	TPHG	B	T	E	X	MTBE	TPHD	HBHCs	Total Chlorinated Pesticides	PCE*	Arsenic	Arsenic WET	Lead	Lead WET
MW-2	1	12/19/96	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	470	<0.5	91	<0.5
	3	12/19/96	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	400	<0.5	96	<0.5
MW-3	3.5-5	12/18/96	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	25	NA	6	NA
	58.5-60	12/18/96	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.05	NA	NA	NA	NA

TPHG	Total petroleum hydrocarbons as gasoline
B	Benzene
T	Toluene
E	Ethylbenzene
X	Xylenes
MTBE	Methyl-tert-butyl ether
TPHD	Total petroleum hydrocarbons as diesel
HBHCs	High-boiling-point hydrocarbons
PCE	Tetrachloroethene
WET	Waste Extraction Test

(1) NA = not analyzed or available

(2) ND = not detected above method reporting limits in the certified laboratory reports.

(3) * = All other VOCs by EPA method 8010 below method reporting limits.

(4) ** = Sample contained 20 mg/kg oil and grease. Sample tested for semi-volatile organic compounds. All analytes below the method reporting limits.

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Table 4

Summary of Groundwater Analytical Results
Federal Realty Investment Trust
2980-3030 Stevens Creek Boulevard, San Jose, California

Units: ug/L

Well Designation	Date Sampled	TPHG	B	T	E	X	MTBE	TPHD	Heavy Oil	Total Pesticides	Total VOCs
MW-1	12/31/96	<50	<0.5	<0.5	<0.5	<0.5	<3	<50	ND	ND	ND
MW-2	12/20/96	<50	<0.5	<0.5	<0.5	<0.5	NA	200	670	ND	ND
MW-3	12/20/96	<50	<0.5	<0.5	<0.5	<0.5	NA	<50	190	ND	ND

TPHG	Total petroleum hydrocarbons as gasoline
B	Benzene
T	Toluene
E	Ethylbenzene
X	Xylenes
MTBE	Methyl-tert-butyl ether
TPHD	Total petroleum hydrocarbons as diesel
Total VOCs	Total volatile organic compounds

(1) NA = not analyzed or available
(2) ND = not detected above method reporting limits in the certified laboratory reports.

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Table 5

Estimation of Soil Ingestion Dose
Federal Realty Investment Trust
2980-3030 Stevens Creek Boulevard, San Jose, California

Parameter	Symbol	Units	Note	DDD	DDE	DDT	Chloropropham	Arsenic	Benzene	Ethylbenzene	Toluene	Xylenes	PCE
Soil Chemical Concentration	Cs	mg/kg		1.1	7.5	4.9	22	0.9	0.084	0.1	0.16	0.37	0.31
Exposure frequency	EF	day/year	1	350	350	350	350	350	350	350	350	350	350
Exposure duration - kids	EDk	years	1	6	6	6	6	6	6	6	6	6	6
Exposure duration - adults	EDa	years	1	24	24	24	24	24	24	24	24	24	24
Soil ingestion rate - kids	SIRk	mg/day	1	200	200	200	200	200	200	200	200	200	200
Soil ingestion rate - adults	SIRa	mg/day	1	100	100	100	100	100	100	100	100	100	100
Conversion factor	CF2	kg/mg	1	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06
Body weight - kids	BWk	kg	1	15	15	15	15	15	15	15	15	15	15
Body weight - adults	BWa	kg	1	70	70	70	70	70	70	70	70	70	70
Averaging time (noncarcinogens) - kids	ATnk	days	2	2190	2190	2190	2190	2190	2190	2190	2190	2190	2190
Averaging time (noncarcinogens) - adults	ATna	days	3	8760	8760	8760	8760	8760	8760	8760	8760	8760	8760
Averaging time (carcinogens)	ATc	days	4	25550	25550	25550	25550	25550	25550	25550	25550	25550	25550
Daily Dose - Cancer - Kids	LADDk	mg/kg/day	5	1.21E-06	8.22E-06	5.37E-06	2.41E-05	9.86E-07	9.21E-08	1.10E-07	1.75E-07	4.05E-07	3.40E-07
Daily Dose - Cancer - Adults	LADDa	mg/kg/day	6	5.17E-07	3.52E-06	2.30E-06	1.03E-05	4.23E-07	3.95E-08	4.70E-08	7.51E-08	1.74E-07	1.46E-07
Daily Dose - Cancer - Kid/Adult	LADDka	mg/kg/day	7	1.72E-06	1.17E-05	7.67E-06	3.44E-05	1.41E-06	1.32E-07	1.57E-07	2.50E-07	5.79E-07	4.85E-07
Slope Factor	SF	$(mg/kg/day)^{-1}$	8	0.24	0.34	0.34	NA	1.5	0.1	NA	NA	NA	0.051
Cancer Risk - Kid/Adult	CR	Unitless	9	4.13E-07	3.99E-06	2.61E-06	NA	2.11E-06	1.32E-08	NA	NA	NA	2.48E-08
Daily Dose - Noncancer - Kids	ADDk	mg/kg/day	10	1.41E-05	9.59E-05	6.26E-05	2.81E-04	1.15E-05	1.07E-06	1.28E-06	2.05E-06	4.73E-06	3.96E-06
Daily Dose - Noncancer - Adults	ADDa	mg/kg/day	11	1.51E-06	1.03E-05	6.71E-06	3.01E-05	1.23E-06	1.15E-07	1.37E-07	2.19E-07	5.07E-07	4.25E-07
Reference Dose	RfD	mg/kg/day	12	5.00E-04	5.00E-04	5.00E-04	2.00E-01	3.00E-04	NA	1.00E-01	2.00E-01	2.00E+00	1.00E-02
Hazard Quotient - Kids	HQk	Unitless	13	2.81E-02	1.92E-01	1.25E-01	1.41E-03	3.84E-02	NA	1.28E-05	1.02E-05	2.37E-06	[illegible].96E-04
Hazard Quotient - Adults	HQa	Unitless	14	3.01E-03	2.05E-02	1.34E-02	1.51E-04	4.11E-03	NA	1.37E-06	1.10E-06	2.53E-07	4.25E-05

[1] From: California (1994)
[2] EDk * 365 days/yr
[3] EDa * 365 days/yr
[4] 70 year lifetime * 365 days/yr
[5] (Cs * SIRk * CF2 * EF * EDk)/(BWk * ATc)
[6] (Cs * SIRa * CF2 * EF * EDa)/(BWa * ATc)
[7] LADDk + LADDa
[8] Slope factors from OEHHA (1994)
[9] CR = LADDka * SF
[10] (Cs * EF * EDk * SIRk * CF2/BWk * ATnk)
[11] (Cs * EF * EDa * SIRa * CF2/BWa * ATna)
[12] Chronic reference dose for DDT from USEPA (1996). Toxicity of DDD and DDE assumed to be equal to that for DDT.
[13] ADDk/RfD
[14] ADDa/RfD

97 - 036

Table 6

Estimation of Dermal Dose
Federal Realty Investment Trust
2980-3030 Stevens Creek Boulevard, San Jose, California

Parameter	Symbol	Units	Note	DDD	DDE	DDT	Chloropropham	Arsenic	Benzene	Ethylbenzene	Toluene	Xylenes	PCE
Soil Chemical Concentration	Cs	mg/kg		1.1	7.5	4.9	22	0.9	0.084	0.1	0.16	0.37	0.31
Dermal Absorption Factor	DAF	Unitless	1	0.05	0.05	0.05	0.25	0.03	0.1	0.1	0.1	0.1	0.1
Soil Adherence Factor	SAF	mg/cm^2-day	1	1	1	1	1	1	1	1	1	1	1
Exposed Skin Area - Kids	ESk	cm^2	1	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
Exposed Skin Area - Adults	ESa	cm^2	1	5800	5800	5800	5800	5800	5800	5800	5800	5800	5800
Unit Conversion Factor	CF1	kg/mg		1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06
Body Weight - Kids	BWk	kg	1	15	15	15	15	15	15	15	15	15	15
Body Weight - Adults	BWa	kg	1	70	70	70	70	70	70	70	70	70	70
Exposure Frequency - Kids	EFk	days/yr	1	350	350	350	350	350	350	350	350	350	350
Exposure Frequency - Adults	EFa	days/yr	1	100	100	100	100	100	100	100	100	100	100
Exposure Duration - Kids	EDk	yr	1	6	6	6	6	6	6	6	6	6	6
Exposure Duration - Adults	EDa	yr	1	24	24	24	24	24	24	24	24	24	24
Year Length	Y	day/yr	1	365	365	365	365	365	365	365	365	365	365
Lifetime	LT	years	1	70	70	70	70	70	70	70	70	70	70
Daily Dose - Cancer - Kids	LADDk	mg/kg/day	2	6.03E-07	4.11E-06	2.68E-06	6.03E-05	2.96E-07	9.21E-08	1.10E-07	1.75E-07	4.05E-07	3.40E-07
Daily Dose - Cancer - Adults	LADDa	mg/kg/day	3	4.28E-07	2.92E-06	1.91E-06	4.28E-05	2.10E-07	6.54E-08	7.78E-08	1.25E-07	2.88E-07	2.41E-07
Daily Dose - Cancer - Kid/Adult	LADDka	mg/kg/day	4	1.03E-06	7.03E-06	4.59E-06	1.03E-04	5.06E-07	1.57E-07	1.87E-07	3.00E-07	6.93E-07	5.81E-07
Slope Factor	SF	$(mg/kg/day)^{-1}$	5	0.24	0.34	0.34	NA	1.5	0.1	NA	NA	NA	0.051
Cancer Risk - Kid/Adult	CR	Unitless	6	2.47E-07	2.39E-06	1.56E-06	NA	7.59E-07	1.57E-08	NA	NA	NA	2.96E-08
Daily Dose - Noncancer - Kids	ADDk	mg/kg/day	7	7.03E-06	4.79E-05	3.13E-05	7.03E-04	3.45E-06	1.07E-06	1.28E-06	2.05E-06	4.73E-06	3.96E-06
Daily Dose - Noncancer - Adults	ADDa	mg/kg/day	8	1.25E-06	8.51E-06	5.56E-06	1.25E-04	6.13E-07	1.91E-07	2.27E-07	3.63E-07	8.40E-07	7.04E-07
Reference Dose	RfD	mg/kg/day	9	5.00E-04	5.00E-04	5.00E-04	2.00E-01	3.00E-04	NA	1.00E-01	2.00E-01	2.00E+00	1.00E-02
Hazard Quotient - Kids	HQk	Unitless	10	1.41E-02	9.59E-02	6.26E-02	3.52E-03	1.15E-02	NA	1.28E-05	1.02E-05	2.37E-06	3.96E-04
Hazard Quotient - Adults	HQa	Unitless	11	2.50E-03	1.70E-02	1.11E-02	6.24E-04	2.04E-03	NA	2.27E-06	1.82E-06	4.20E-07	7.04E-05

[1] From: California (1994)

[2] (DAF * Cs * SAF * CF1 * ESk * EFk * EDk)/(BWk * LT * Y)

[3] (DAF * Cs * SAF * CF1 * ESa * EFa * EDa)/(BWa * LT * Y)

[4] LADDk + LADDa

[5] Slope factors from OEHHA (1994)

[6] CR = LADDka * SF

[7] (DAF * Cs * SAF * CF1 * ESk * EFk * EDk)/(BWk * EDk * Y)

[8] (DAF * Cs * SAF * CF1 * ESa * EFa * EDa)/(BWa * EDa * Y)

[9] Chronic reference dose for DDT from USEPA (1996). Toxicity of DDD and DDE assumed to be equal to that for DDT.

[10] ADDk/RfD

[11] ADDa/RfD

Table 7

Estimation of Inhalation of Dust Dose
Federal Realty Investment Trust
2980-3030 Stevens Creek Boulevard, San Jose, California

Parameter	Symbol	Units	Note	DDD	DDE	DDT	Chloropropham	Arsenic
Respirable particulates	RP	mg/m^3	14	0.05	0.05	0.05	0.05	0.05
Conversion factor	CF2	kg/mg	1	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06
Soil chemical conc.	Cs	mg/kg		1.1	7.5	4.9	22	0.9
Air concentration	Ca	mg/m^3	15	5.50E-08	3.75E-07	2.45E-07	1.10E-06	4.50E-08
Exposure frequency	EF	day/year	1	350	350	350	350	350
Exposure duration - kids	EDk	years	1	6	6	6	6	6
Exposure duration - adults	EDa	years	1	24	24	24	24	24
Inhalation rate - kids	IRk	m^3/day	1	10	10	10	10	10
Inhalation rate - adults	IRa	m^3/day	1	20	20	20	20	20
Body weight - kids	BWk	kg	1	15	15	15	15	15
Body weight - adults	BWa	kg	1	70	70	70	70	70
Averaging time (noncarcinogens) - kids	ATnk	days	2	2190	2190	2190	2190	2190
Averaging time (noncarcinogens) - adults	ATna	days	3	8760	8760	8760	8760	8760
Averaging time (carcinogens)	ATc	days	1	25550	25550	25550	25550	25550
Daily Dose - Cancer - Kids	LADDk	mg/kg/day	4	3.01E-09	2.05E-08	1.34E-08	6.03E-08	2.47E-09
Daily Dose - Cancer - Adults	LADDa	mg/kg/day	5	5.17E-09	3.52E-08	2.30E-08	1.03E-07	4.23E-09
Daily Dose - Cancer - Kid/Adult	LADDka	mg/kg/day	6	8.18E-09	5.58E-08	3.64E-08	1.64E-07	6.69E-09
Slope Factor	SF	$(mg/kg/day)^{-1}$	7	0.24	0.34	0.34	NA	15
Cancer Risk - Kid/Adult	CR	Unitless	8	1.96E-09	1.90E-08	1.24E-08	NA	1.00E-07
Daily Dose - Noncancer - Kids	ADDk	mg/kg/day	9	3.52E-08	2.40E-07	1.57E-07	7.03E-07	2.88E-08
Daily Dose - Noncancer - Adults	ADDa	mg/kg/day	10	1.51E-08	1.03E-07	6.71E-08	3.01E-07	1.23E-08
Reference Dose	RfD	mg/kg/day	11	5.00E-04	5.00E-04	5.00E-04	2.00E-01	3.00E-04
Hazard Quotient - Kids	HQk	Unitless	12	7.03E-05	4.79E-04	3.13E-04	3.52E-06	9.59E-05
Hazard Quotient - Adults	HQa	Unitless	13	3.01E-05	2.05E-04	1.34E-04	1.51E-06	4.11E-05

[1] From: California (1994)
[2] EDk * 365 days/yr
[3] EDa * 365 days/yr
[4] (Ca * IRk * EF * EDk) /(BWk * ATc)
[5] (Ca * IRa * EF * EDa)/(BWa * ATc)
[6] LADDk + LADDa
[7] Slope factors from OEHHA (1994)
[8] CR = LADDka * SF
[9] (Ca * IRk * EF * EDk)/(BWk * ATnk)
[10] (Ca * IRa * EF * EDa)/(BWa * ATna)
[11] Chronic reference dose for DDT from USEPA (1996). Toxicity of DDD and DDE assumed to be equal to that for DDT.
[12] ADDk/RfD
[13] ADDa/RfD
[14] RP = National Ambient Air Quality Standard for PM_{10} (California, 1994)
[15] Ca = Cs * RP * CF2 (California, 1994)

97-036

Table 8

Estimation of Volatile Inhalation Dose
Federal Realty Investment Trust
2980-3030 Stevens Creek Boulevard, San Jose, California

Parameter	Symbol	Units	Note	Benzene	Ethylbenzene	Toluene	Xylenes	PCE
Air diffusion coefficient	Di	cm2/sec	1	0.088	0.075	0.078	0.087	0.072
Henry's Law constant	Hc	atm-m3/mol	1	5.43E-03	8.44E-03	5.94E-03	5.30E-03	1.49E-02
Organic soil-water partition coefficient	Koc	L/kg	1	65	220	257	240	661
Fraction of organic carbon in soil	foc	Unitless	1	0.02	0.02	0.02	0.02	0.02
Soil chemical concentration	Cl	mg/kg		0.084	0.1	0.16	0.37	0.31
VOC emission rate numerator	Ei1	NA	1	4.94E-06	2.30E-06	2.31E-06	5.69E-06	4.03E-06
VOC emission rate denominator	Ei2	NA	1	1.34E-02	8.43E-03	6.69E-03	6.91E-03	6.35E-03
Total VOC emission rate	Ei	mg/sec	14	3.69E-04	2.73E-04	3.45E-04	8.23E-04	6.34E-04
Box model default divisor	BM	unitless	1	99	99	99	99	99
Conversion factor	CF2	kg/mg	1	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06
Air concentration	Ca	mg/m^3	15	3.73E-06	2.76E-06	3.48E-06	8.32E-06	6.40E-06
Exposure frequency	EF	day/year	1	350	350	350	350	350
Exposure duration - kids	EDk	years	1	6	6	6	6	6
Exposure duration - adults	EDa	years	1	24	24	24	24	24
Inhalation rate - kids	IRk	m^3/day	1	10	10	10	10	10
Inhalation rate - adults	IRa	m^3/day	1	20	20	20	20	20
Body weight - kids	BWk	kg	1	15	15	15	15	15
Body weight - adults	BWa	kg	1	70	70	70	70	70
Averaging time (noncarcinogens) - kids	ATnk	days	2	2190	2190	2190	2190	2190
Averaging time (noncarcinogens) - adults	ATna	days	3	8760	8760	8760	8760	8760
Averaging time (carcinogens)	ATc	days	1	25550	25550	25550	25550	25550
Daily Dose - Cancer - Kids	LADDk	mg/kg/day	4	2.04E-07	1.51E-07	1.91E-07	4.56E-07	3.51E-07
Daily Dose - Cancer - Adults	LADDa	mg/kg/day	5	3.50E-07	2.59E-07	3.27E-07	7.81E-07	6.02E-07
Daily Dose - Cancer - Kid/Adult	LADDka	mg/kg/day	6	5.54E-07	4.10E-07	5.18E-07	1.24E-06	9.53E-07
Slope Factor	SF	(mg/kg/day)$^{-1}$	7	0.1	NA	NA	NA	0.021
Cancer Risk - Kid/Adult	CR	Unitless	8	5.54E-08	NA	NA	NA	2.00E-08
Daily Dose - Noncancer - Kids	ADDk	mg/kg/day	9	2.38E-06	1.76E-06	2.23E-06	5.32E-06	4.09E-06
Daily Dose - Noncancer - Adults	ADDa	mg/kg/day	10	1.02E-06	7.56E-07	9.55E-07	2.28E-06	1.75E-06
Reference Dose	RfD	mg/kg/day	11	NA	2.90E-01	1.10E-01	2.00E-01	1.00E-02
Hazard Quotient - Kids	HQk	Unitless	12	NA	6.08E-06	2.02E-05	2.66E-05	4.09E-04
Hazard Quotient - Adults	HQa	Unitless	13	NA	2.61E-06	8.68E-06	1.14E-05	1.75E-04

[1] From: California (1994)

[2] EDk * 365 days/yr

[3] EDa * 365 days/yr

[4] (Ca * IRk * EF * EDk) /(BWk * ATc)

[5] (Ca * IRa * EF * EDa)/(BWa * ATc)

[6] LADDk + LADDa

[7] Slope factors from OEHHA (1994)

[8] CR = LADDka * SF

[9] (Ca * IRk * EF * EDk)/(BWk * ATnk)

[10] (Ca * IRa * EF * EDa)/(BWa * ATna)

[11] Chronic reference dose for DDT from USEPA (1996). Toxicity of DDD and DDE assumed to be equal to that for DDT.

[12] ADDk/RfD

[13] ADDa/RfD

[14] Ei = Ei1/Ei2 (California, 1994)

[15] Ca = Ei/BM (California, 1994)

Santa Clara Valley Water District

5750 Almaden Expressway, San Jose, CA 95118 (408) 265-2600

WELL CONSTRUCTION APPLICATION

FC 158 (04-22-92) (DP 4-901)

TO BE COMPLETED BY DISTRICT

District Permit No.: 96W00899	Date Issued: 12-4-96	Well Registration No:
Geologic Setting: 1	Expiration Date: 6-4-97	Driller's Log No: 526499

TO BE COMPLETED BY OWNER AND DRILLER

Property Owner: FEDERAL REALTY INVESTMENT TRUST	Well Owner (if different):	Drilling Co: EXPLORATION GEOSERVICES
Address: 1626 E. JEFFERSON ST.	Address of Well Site: 3030 STEVENS CREEK BLVD.	Driller's Contractors License Number (C-57 Req'd): #C57-484288
City, State, Zip: 20852-4041 ROCKVILLE, MARYLAND	City, State, Zip: SAN JOSE, CA	Address: 1535 INDUSTRIAL AVE.
Telephone No: 310-998-8100	Telephone No: NA	City, State, Zip: SAN JOSE, CA 95112
Assessor's Parcel No. of Well site: Book 277 Page 33 Parcel 004	Owner's/Consultant's Well No: MW-1	Telephone No: 408-280-6822

Estimated depth of completed well: ☐ Less than 50 ft. ☒ 50 to 300 ft. ☐ Over 300 ft.

Purpose of Well: ☐ Domestic ☐ Municipal/Industrial ☐ Agricultural ☒ *Monitoring ☐ Cathodic Protection

*Monitoring wells are those constructed for the purpose of obtaining repetitive water level measurements and/or repetitive air samples for analysis. This includes wells constructed for general exploration and investigation purposes as well as those to be constructed in conformance with the Hazardous Materials Storage Permit Ordinance for site-specific groundwater monitoring of existing underground hazardous materials storage tanks.

THIS SECTION TO BE COMPLETED FOR ALL MONITORING WELLS OR EXTRACTION/RECOVERY WELLS

Purpose of Monitoring Well: ☐ To comply with City or County Hazardous Materials Storage Permit Ordinance ☒ Exploration studies

☐ Other (specify): ☐ Extraction/Recovery

NAME OF BUSINESS AT WELL SITE: COURTESY CHEVROLET

If proposed well is to meet compliance with a Hazardous Materials Storage Permit Ordinance has the City or County been contacted? ☐ Yes ☐ No

Type of monitoring device: ☒ Groundwater ☐ Vadose

Type of extraction device ☐ Groundwater ☐ Vadose

Monitoring well use: ☐ Depth ☒ Quality ☐ Chloride

Vadose device installation: ☐ Vapor ☐ Interface ☐ Suction Lysimeter

Consultant's Name (Company): EMCON

Address: 1921 RINGWOOD AVE.

City, State, Zip: SAN JOSE, CA 95131

Telephone No.: 408-453-7300

Signature of Responsible Professional
(No substitution of signature will be accepted)

RG 4462

Registration No. Civil Engineer OR Certificate No. Engineering Geologist

TOPOGRAPHIC FEATURES

Well is to be constructed: ☐ In a public sidewalk ☐ In a public road ☐ On public property ☒ On private property ☐ On SCVWD property

Within 50 ft of the top of a creek bank	☐ Yes	☒ No	Within 50 ft. of any existing well	☐ Yes	☒ No
Within 50 ft. of a sanitary sewer	☐ Yes	☒ No	Within 150 ft of a cesspool or seepage pit	☐ Yes	☒ No
Within 100 ft. of a pit privy, septic tank, leachfield	☐ Yes	☒ No	Other wells exist on this property	☐ Yes	☒ No

Status: ☐ Active ☐ Inactive ☐ Abandoned

CERTIFICATION BY WELL OWNER/AGENT AND DRILLER/AGENT:

I certify that the information given above is correct to the best of my knowledge. I certify that the well will be constructed in compliance with the conditions of this permit, the Santa Clara Valley Water District's Ordinance 90-1 and, if applicable, the Hazardous Materials Storage Permit Ordinance of the County or City, as appropriate. It is my responsibility as the well owner to notify this District of any changes in the purpose of this well from that which is indicated on this application form.

Peter Cantor (EMCON) 12/26/96
Signature of Well Owner/Agent Date

Peter Cantor (EMCON) 11/26/96
Signature of Driller/Agent Date

MONITORING WELL PLAN APPROVAL

City/County:

Approved by: 97-036

Date:

IMPORTANT: A minimum 24-hour notice must be given to SCVWD Well Inspection Dept. prior to installing the annular seal. Call (408) 927-0710 Ext. 660. For weekends, holidays, after hours call (408) 395-8121 or (408) 927-0714.

Santa Clara Valley Water District

5750 Almaden Expressway, San Jose, CA 95118 (408) 265-2600

WELL CONSTRUCTION APPLICATION

FC 158 (04-22-92) (DP 4-901)

TO BE COMPLETED BY DISTRICT

District Permit No.: 96W00900	Date Issued: 12-4-96	Well Registration No.:
Geologic Setting: 1	Expiration Date: 6-4-97	Driller's Log No.: 526500

TO BE COMPLETED BY OWNER AND DRILLER

Property Owner: FEDERAL REALTY INVESTMENT TRUST	Well Owner (if different):	Drilling Co: EXPLORATION GEOSERVICES
Address: 1626 E. JEFFERSON ST.	Address of Well Site: 3030 STEVENS CREEK BLVD	Driller's Contractors License Number (C-57 Req'd): #C57-484288
City, State, Zip: 20852-4041 ROCKVILLE, MARYLAND	City, State, Zip: SAN JOSE, CA	Address: 1535 INDUSTRIAL AVE.
Telephone No: 310-998-8100	Telephone No: NA	City, State, Zip: SAN JOSE, CA 95112
Assessor's Parcel No. of Well site: Book 277 Page 33 Parcel 004	Owner's/Consultant's Well No: MW-2	Telephone No: 408-280-6822

Estimated depth of completed well: ☐ Less than 50 ft. ☒ 50 to 300 ft. ☐ Over 300 ft.

Purpose of Well: ☐ Domestic ☐ Municipal/Industrial ☐ Agricultural ☒ *Monitoring ☐ Cathodic Protection

*Monitoring wells are those constructed for the purpose of obtaining repetitive water level measurements and/or repetitive air samples for analysis. This includes wells constructed for general exploration and investigation purposes as well as those to be constructed in conformance with the Hazardous Materials Storage Permit Ordinance for site-specific groundwater monitoring of existing underground hazardous materials storage tanks.

THIS SECTION TO BE COMPLETED FOR ALL MONITORING WELLS OR EXTRACTION/RECOVERY WELLS

Purpose of Monitoring Well: ☐ To comply with City or County Hazardous Materials Storage Permit Ordinance ☒ Exploration studies

☐ Other (specify): ☐ Extraction/Recovery

NAME OF BUSINESS AT WELL SITE: VACANT LOT

If proposed well is to meet compliance with a Hazardous Materials Storage Permit Ordinance has the City or County been contacted? ☐ Yes ☐ No

Type of monitoring device: ☒ Groundwater ☐ Vadose

Type of extraction device ☐ Groundwater ☐ Vadose

Monitoring well use: ☐ Depth ☒ Quality ☐ Chloride

Vadose device installation: ☐ Vapor ☑ Interface ☐ Suction Lysimeter

Consultant's Name (Company): EMCON

Address: 1921 RINGWOOD AVE.

City, State, Zip: SAN JOSE, CA 95131

Telephone No.: 408-453-7300

Signature of Responsible Professional
(No substitution of signature will be accepted).

RG 4462

Registration No. Civil Engineer OR Certificate No. Engineering Geologist

TOPOGRAPHIC FEATURES

Well is to be constructed: ☐ In a public sidewalk ☐ In a public road ☐ On public property ☒ On private property ☐ On SCVWD property

Within 50 ft of the top of a creek bank	☐ Yes	☒ No	Within 50 ft. of any existing well	☐ Yes	☒ No
Within 50 ft. of a sanitary sewer	☐ Yes	☒ No	Within 150 ft of a cesspool or seepage pit	☐ Yes	☒ No
Within 100 ft. of a pit privy, septic tank, leachfield	☐ Yes	☒ No	Other wells exist on this property	☐ Yes	☒ No

Status: ☐ Active ☐ Inactive ☐ Abandoned

CERTIFICATION BY WELL OWNER/AGENT AND DRILLER/AGENT:

I certify that the information given above is correct to the best of my knowledge. I certify that the well will be constructed in compliance with the conditions of this permit, the Santa Clara Valley Water District's Ordinance 90-1 and, if applicable, the Hazardous Materials Storage Permit Ordinance of the County or City, as appropriate. It is my responsibility as the well owner to notify this District of any changes in the purpose of this well from that which is indicated on this application form.

(EMCON) 11/26/96
Signature of Well Owner/Agent Date

EMCON 11/26/96
Signature of Driller/Agent Date

MONITORING WELL PLAN APPROVAL
City/County:
Approved by: 97-036
Date:

IMPORTANT: A minimum 24-hour notice must be given to SCVWD Well Inspection Dept. prior to installing the annular seal. Call (408) 927-0710 Ext. 660. For weekends, holidays, after hours call (408) 395-8121 or (408) 927-0714.

Santa Clara Valley Water District

5750 Almaden Expressway, San Jose, CA 95118 (408) 265-2600

WELL CONSTRUCTION APPLICATION

FC 158 (04-22-92) (DP 4-901)

TO BE COMPLETED BY DISTRICT

District Permit No.: 96W00901	Date Issued: 12-4-96	Well Registration No:
Geologic Setting: 1	Expiration Date: 6-4-97	Driller's Log No: 526501

TO BE COMPLETED BY OWNER AND DRILLER

Property Owner: FEDERAL REALTY INVESTMENT TRUST	Well Owner (if different):	Drilling Co: EXPLORATION GEOSERVICES
Address: 1626 E. JEFFERSON ST.	Address of Well Site: 3030 STEVENS CREEK BLVD.	Driller's Contractors License Number (C-57 Req'd): #C57-484288
City, State, Zip: 20852-4041 ROCKVILLE MARYLAND	City, State, Zip: SAN JOSE, CA	Address: 1535 INDUSTRIAL AVE.
Telephone No: 310-998-8100	Telephone No: NA	City, State, Zip: SAN JOSE, CA 95112
Assessor's Parcel No. of Well site: Book 277 Page 33 Parcel 004	Owner's/Consultant's Well No: MW-3	Telephone No: 408-280-6822

Estimated depth of completed well: ☐ Less than 50 ft. ☒ 50 to 300 ft. ☐ Over 300 ft.

Purpose of Well: ☐ Domestic ☐ Municipal/Industrial ☐ Agricultural ☒ *Monitoring ☐ Cathodic Protection

*Monitoring wells are those constructed for the purpose of obtaining repetitive water level measurements and/or repetitive air samples for analysis. This includes wells constructed for general exploration and investigation purposes as well as those to be constructed in conformance with the Hazardous Materials Storage Permit Ordinance for site-specific groundwater monitoring of existing underground hazardous materials storage tanks.

THIS SECTION TO BE COMPLETED FOR ALL MONITORING WELLS OR EXTRACTION/RECOVERY WELLS

Purpose of Monitoring Well: ☐ To comply with City or County Hazardous Materials Storage Permit Ordinance ☒ Exploration studies

☐ Other (specify): ☐ Extraction/Recovery

NAME OF BUSINESS AT WELL SITE: HOBEES RESTAURANT

If proposed well is to meet compliance with a Hazardous Materials Storage Permit Ordinance has the City or County been contacted? ☐ Yes ☐ No

Type of monitoring device: ☒ Groundwater ☐ Vadose

Type of extraction device ☐ Groundwater ☐ Vadose

Monitoring well use: ☐ Depth ☒ Quality ☐ Chloride

Vadose device installation: ☐ Vapor ☐ Interface ☐ Suction Lysimeter

Consultant's Name (Company): EMCON

Address: 1921 RINGWOOD AVE.

City, State, Zip: SAN JOSE, CA 95131

Telephone No.: 408-453-7300

Signature of Responsible Professional
(No substitution of signature will be accepted)

RG 4462

Registration No. Civil Engineer OR Certificate No. Engineering Geologist

TOPOGRAPHIC FEATURES

Well is to be constructed: ☐ In a public sidewalk ☐ In a public road ☐ On public property ☒ On private property ☐ On SCVWD property

Within 50 ft of the top of a creek bank ☐ Yes ☒ No		Within 50 ft. of any existing well ☐ Yes ☒ No
Within 50 ft. of a sanitary sewer ☐ Yes ☒ No		Within 150 ft of a cesspool or seepage pit ☐ Yes ☒ No
Within 100 ft. of a pit privy, septic tank, leachfield ☐ Yes ☒ No		Other wells exist on this property ☐ Yes ☒ No
		Status: ☐ Active ☐ Inactive ☐ Abandoned

CERTIFICATION BY WELL OWNER/AGENT AND DRILLER/AGENT:

I certify that the information given above is correct to the best of my knowledge. I certify that the well will be constructed in compliance with the conditions of this permit, the Santa Clara Valley Water District's Ordinance 90-1 and, if applicable, the Hazardous Materials Storage Permit Ordinance of the County or City, as appropriate. It is my responsibility as the well owner to notify this District of any changes in the purpose of this well from that which is indicated on this application form.

(EMCON) 11/26/96
Signature of Well Owner/Agent Date

(EMCON) 11/26/96
Signature of Driller/Agent Date

MONITORING WELL PLAN APPROVAL

City/County:

Approved by: 97-036

Date:

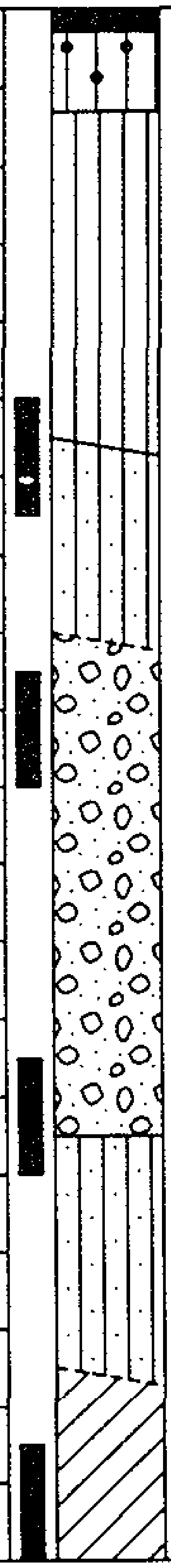
IMPORTANT: A minimum 24-hour notice must be given to SCVWD Well Inspection Dept. prior to installing the annular seal. Call (408) 927-0710 Ext. 660. For weekends, holidays, after hours call (408) 395-8121 or (408) 927-0714.

LOG OF EXPLORATORY BORING

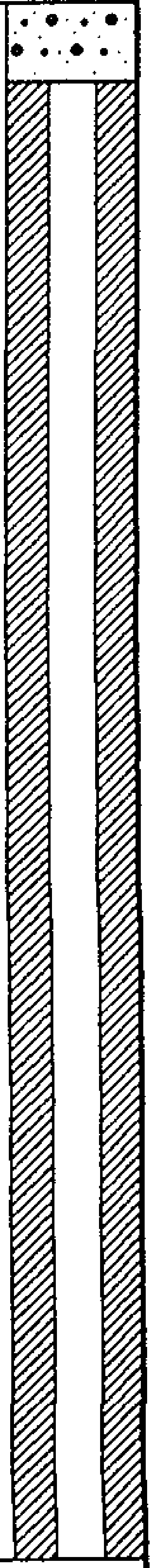
PROJECT NUMBER: **22152-001.001**
BORING NO.: **MW-1**
PROJECT NAME: **Federal Realty Investment Trust**
PAGE: **1 of 4**
BY: **R. Davis**
DATE: **12/20/96**
SURFACE ELEVATION: **130.33 ft.**

RECOVERY (ft/ft)	PID (ppm)	PENETRATION (blws/6")	GROUND WATER LEVELS	DEPTH IN FEET	DESCRIPTION
					ASPHALT/AGGREGATE BASE.
					SILTY GRAVEL (GM), roadbase.
					SILT (ML), very dark grayish brown (10YR, 3/2); 95-100% low-plasticity fines; trace to 5% fine sand; stiff; damp; no odor. @3.0': light olive brown (2.5Y, 5/4)
1.5/1.5	0.0	5 6 18		5	SILTY SAND (SM), light olive brown (2.5YR, 5/4); 40-45% low-plasticity fines; 50% fine to coase sand, (F:M:C=3:1:1); 5-10% fine gravel; medium dense; damp; no odor.
1.4/1.5	0.0	22 29 33		10	SANDY GRAVEL (GW), olive brown (2.5YR, 4/4); trace to 5% fines; 35-40% fine to coarse sand, (F:M:C=1:1:1); 60-65% fine to coarse gravel, (F:C=1:1); very dense; damp.
1.3/1.5	0.0	7 4 4		15	SILTY SAND (SM), as above at 5.5-8.0'; damp; no product odor.
1.5/1.5	0.0	5 6 6		20	SILTY CLAY (CL), dark yellowish brown (10YR, 4/4); 5-10% fine sand; 90-95% low- to medium-plasticity fines; stiff; damp to moist; no odor.

SAMPLES / LITHOGRAPHIC COLUMN



WELL DETAIL



REMARKS

Boring drilled with 8" diameter hollow-stem auger. Samples were taken with a 2" diameter modified California split spoon sampler and a standard penetrometer. Boring converted to a 2" diameter polyvinyl chloride (PVC) groundwater monitoring well. See explanation sheet for definitions of symbols used in well detail and sample columns of this log

EMCON

97-036

LOG OF EXPLORATORY BORING

PROJECT NUMBER: **22152-001.001**

BORING NO.: **MW-1**

PROJECT NAME: **Federal Realty Investment Trust**

PAGE: **2 of 4**

BY: **R. Davis**

DATE: **12/20/96**

SURFACE ELEVATION: **130.33 ft.**

RECOVERY (ft/ft)	PID (ppm)	PENETRATION (blws/6")	GROUND WATER LEVELS	DEPTH IN FEET	SAMPLES	LITHOGRAPHIC COLUMN	DESCRIPTION	WELL DETAIL
							SILTY CLAY (CL), continued.	
1.5/1.5	0.0	4 4 6		25			@23.5': 5-10% fine to coarse sand; orange and grayish mottling; no odor.	
1.5/1.5	0.0	5 6 9		30			@28.5': thin (1/4") sandy silt to silty sand (ML-SM) lenses; damp.	
1.5/1.5	0.0	8 10 25		35			SILTY SAND (SM), dark yellowish brown (10YR, 4/4); 15-25% low-plasticity fines; 75-85% fine sand; iron-oxide staining common; medium dense; damp; no odor.	
				40			SANDY GRAVEL (GW), olive brown (2.5Y, 4/4); 5-15% low-plasticity fines; 35% fine to coarse sand, (F:M:C=1:1:1); 50-60% fine to coarse gravel, (F:C=1:1); dense to very dense; damp; no odor.	

REMARKS

Boring drilled with 8" diameter hollow-stem auger. Samples were taken with a 2" diameter modified California split spoon sampler and a standard penetrometer. Boring converted to a 2" diameter polyvinyl chloride (PVC) groundwater monitoring well. See explanation sheet for definitions of symbols used in well detail and sample columns of this log

EMCON

97-036

LOG OF EXPLORATORY BORING

PROJECT NUMBER: **22152-001.001**

PROJECT NAME: **Federal Realty Investment Trust**

BY: **R. Davis**

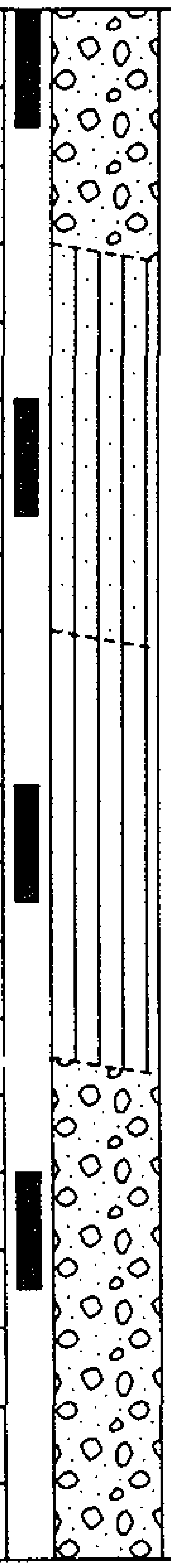
DATE: **12/20/96**

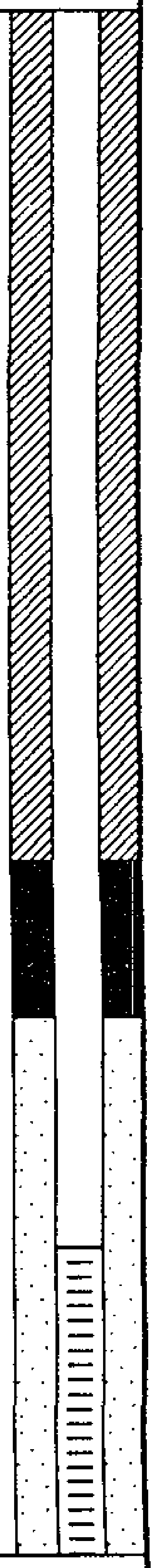
BORING NO.: **MW-1**

PAGE: **3 of 4**

SURFACE ELEVATION: **130.33 ft.**

RECOVERY (ft/ft)	PID (ppm)	PENETRATION (blws/6")	GROUND WATER LEVELS	DEPTH IN FEET	DESCRIPTION
1.5/1.5	0.0	30 31 16			SANDY GRAVEL (GW), continued.
					SILTY SAND (SM), light olive brown (2.5Y, 5/4); 15-25% non-plastic fines; 75-85% fine sand; iron-oxide stained; dense; damp; no odor.
1.5/1.5	0.0	16 18 19		45	
					CLAYEY SILT (ML), mottled grayish brown and light olive brown (2.5Y, 5/2 and 5/4); trace to 5% fine sand; 95-100% low- to medium-plasticity fines; stiff; damp; no odor.
1.5/1.5	0.0	6 8 12		50	
					SANDY GRAVEL (GW), olive brown (2.5Y, 4/4); trace to 5% fines; 40-45% fine to coarse sand, (F:M:C=1:1:1); 50% fine to coarse gravel, (F:C=1:1); very dense; damp; no odor.
1.5/1.5	0.0	30 40 45		55	
			▼ 1/8/97		
			▽ 12/20/9	60	





REMARKS

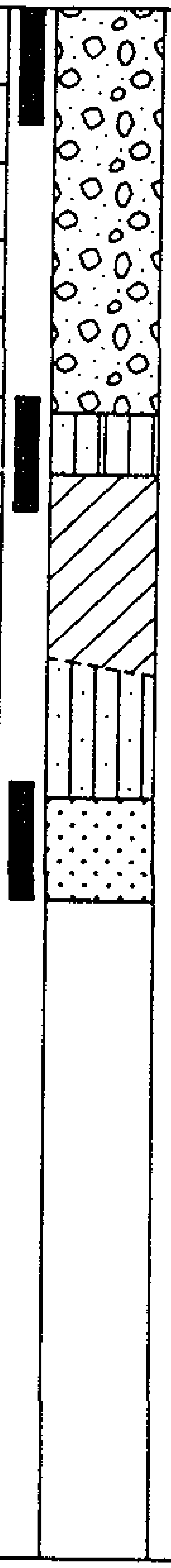
Boring drilled with 8" diameter hollow-stem auger. Samples were taken with a 2" diameter modified California split spoon sampler and a standard penetrometer. Boring converted to a 2" diameter polyvinyl chloride (PVC) groundwater monitoring well. See explanation sheet for definitions of symbols used in well detail and sample columns of this log

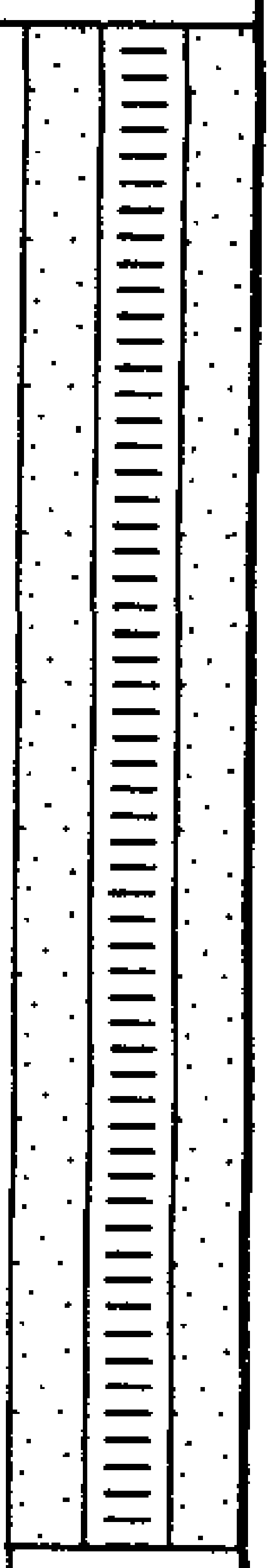
EMCON

LOG OF EXPLORATORY BORING

PROJECT NUMBER: **22152-001.001**
BORING NO.: **MW-1**
PROJECT NAME: **Federal Realty Investment Trust**
PAGE: **4 of 4**
BY: **R. Davis**
DATE: **12/20/98**
SURFACE ELEVATION: **130.33 ft.**

RECOVERY (ft/ft)	PID (ppm)	PENETRATION (blws/6")	GROUND WATER LEVELS	DEPTH IN FEET	DESCRIPTION
1.5/1.5	0.0	20 13 14			GRAVEL (GW), continued. @60.0': wet; no odor.
1.5/1.5	0.0	8 9 10		65	SILTY SAND (SM) and SANDY SILT (ML)-interbedded, 50/50. SILTY SAND (SM): as above at 43-48'; wet. SANDY SILT (ML): light olive brown (2.5Y, 5/4); 15-25% fine sand; 75-85% low-plasticity fines; stiff; damp; no odor. CLAY (CL), dark greenish gray (1 GLEY, 3/1); 95-100% medium-plasticity fines; trace to 5% fine sand; very stiff; moist; no odor. SILTY SAND (SM), dark greenish gray (1 GLEY, 3/1); 15-25% fines; 75-85% fine to medium sand; medium dense; wet.
1.5/1.5	0.0	17 22 30		70	SAND (SP), dark greenish gray (1 GLEY, 3/1); 0-5% fines; 95-100% fine sand; very dense; wet; no odor. BORING TERMINATED AT 71.5 FEET.
				75	
				80	





REMARKS

Boring drilled with 8" diameter hollow-stem auger. Samples were taken with a 2" diameter modified California split spoon sampler and a standard penetrometer. Boring converted to a 2" diameter polyvinyl chloride (PVC) groundwater monitoring well. See explanation sheet for definitions of symbols used in well detail and sample columns of this log

EMCON

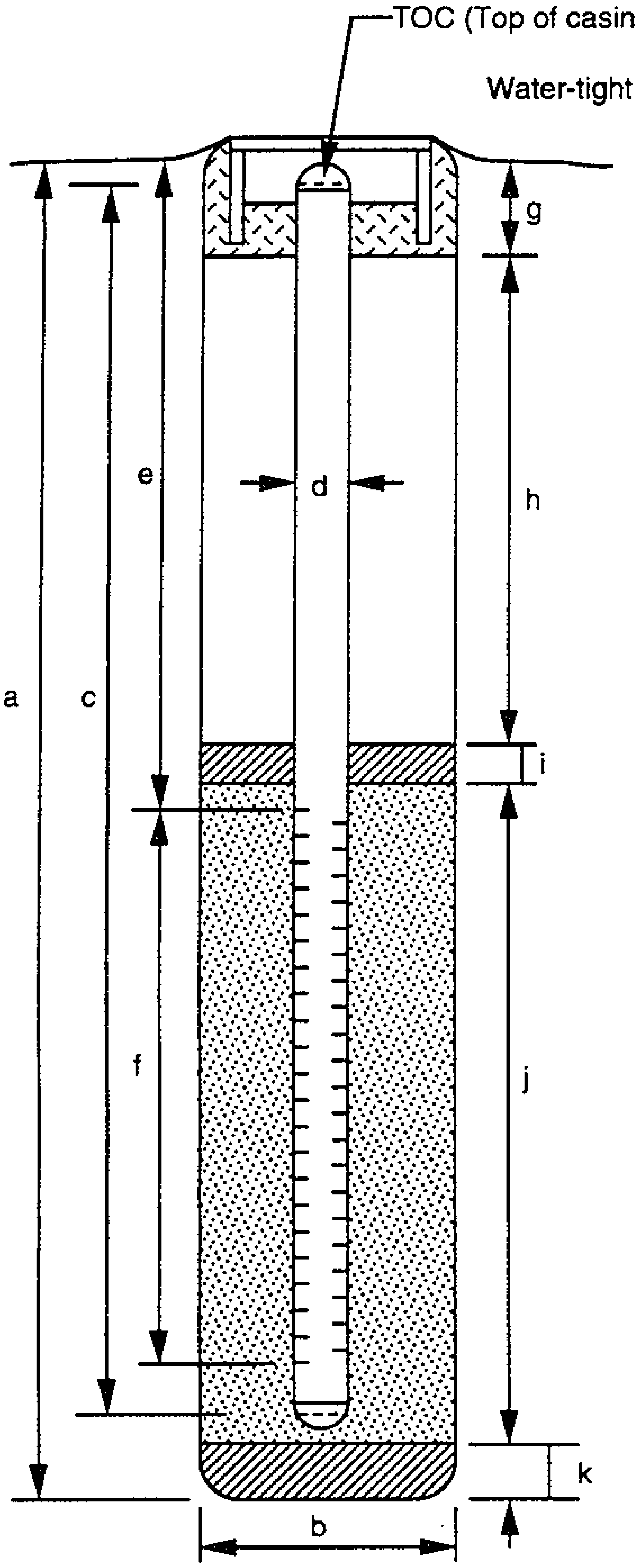
97-036

WELL DETAILS

EMCON ASSOCIATES

PROJECT NUMBER 22152-001.001
PROJECT NAME Federal Realty Investment Trust
LOCATION Town & Country Village Shopping Center
WELL PERMIT NO. 96W00899

BORING / WELL NO. MW-1
TOP OF CASING ELEV. 129.89
GROUND SURFACE ELEV. 130.33
DATUM M.S.L.
INSTALLATION DATE 12-20-96



EXPLORATORY BORING

a. Total depth 71.5 ft.
b. Diameter 8.0 in.
Drilling method Hollow Stem Auger

WELL CONSTRUCTION

c. Total casing length 71.5 ft.
Material Schedule 40 PVC
d. Diameter 2.0 in.
e. Depth to top perforations 56.0 ft.
f. Perforated length 15.0 ft.
Perforated interval from 56 to 71 ft.
Perforation type Machine Slotted
Perforation size 0.010 inch
g. Surface seal 1.0 ft.
Material Concrete
h. Backfill 50.0 ft.
Material Cement Slurry
i. Seal 2.0 ft.
Material Bentonite Pellets
j. Gravel pack 18.0 ft.
Gravel pack interval from 53.0 to 71.0 ft.
Material 2/12 Sand
k. Bottom seal/fill NA ft.
Material NA

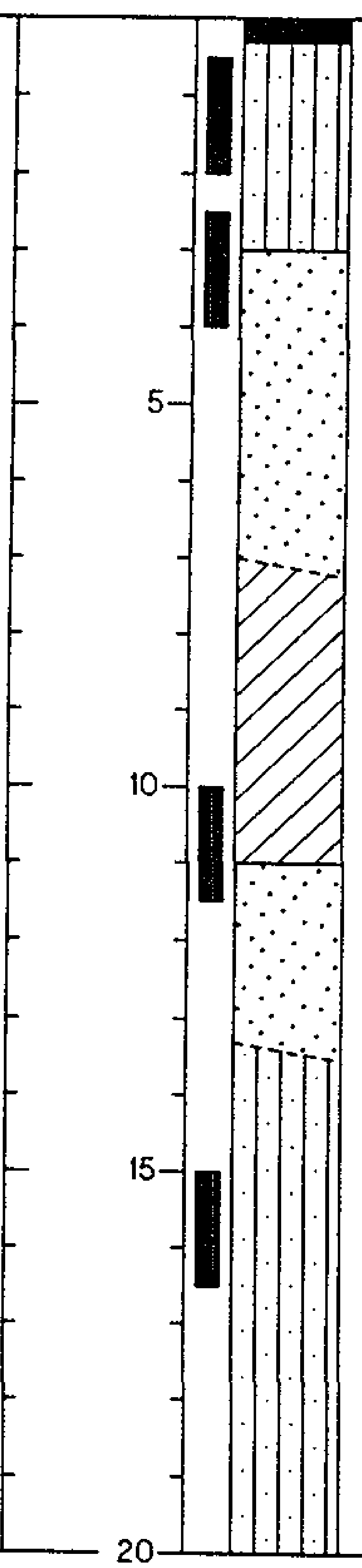
97-036

Form prepared by P. Christianson

LOG OF EXPLORATORY BORING

PROJECT NUMBER: **22152-001.001**
PROJECT NAME: **Federal Realty Investment Trust**
BY: **P. Christianson**
DATE: **12/19/96**
BORING NO.: **MW-2**
PAGE: **1 of 4**
SURFACE ELEVATION: **133.00 ft.**

RECOVERY (ft/ft)	POCKET PENETROMETER (tsf)	PENETRATION (blws/6")	GROUND WATER LEVELS
1.5/1.5		3 3 4	
1.5/1.5		8 5 10	
1.5/1.5	2.0	3 4 5	
1.5/1.5		4 5 6	



DESCRIPTION

ASPHALT/AGGREGATE BASE.

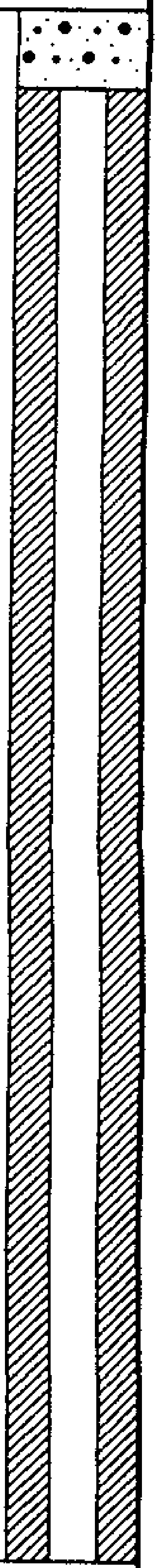
SILTY SAND (SM), dark brown (10YR, 3/3); 20% low-plasticity fines; 70% fine to medium sand, (F:M=2:1); 5% fine gravel; loose; moist.

GRAVELLY SAND (SW), dark grayish brown (10YR, 4/2); 5% low-plasticity fines; 50% fine to coarse sand, (F:M:C=2:1:1); 45% fine to coarse gravel; medium dense; moist.

SANDY CLAY (CL), dark brown (10YR, 3/3); 70% medium-plasticity fines; 30% fine sand; trace fine gravel; stiff; moist.

GRAVELLY SAND (SW), brown (10YR, 4/3); 5% low-plasticity fines; 70% fine to coarse sand, (F:M:C=3:1:1); 25% fine gravel; loose; moist.

SILTY SAND (SM), dark grayish brown (10YR, 4/2); 35% low-plasticity fines; 60% fine sand; 5% fine gravel; medium dense; moist.



REMARKS

Boring drilled with 8" diameter hollow-stem auger. Samples were taken with a 2" diameter modified California split spoon sampler and a standard penetrometer. Boring converted to a 2" diameter polyvinyl chloride (PVC) groundwater monitoring well. See explanation sheet for definitions of symbols used in well detail and sample columns of this log

EMCON

97-036

LOG OF EXPLORATORY BORING

PROJECT NUMBER: **22152-001.001**

BORING NO.: **MW-2**

PROJECT NAME: **Federal Realty Investment Trust**

PAGE: **2 of 4**

BY: **P. Christianson**

DATE: **12/19/96**

SURFACE ELEVATION: **133.00 ft.**

RECOVERY (ft/ft)	POCKET PENETROMETER (tsf)	PENETRATION (blws/6")	GROUND WATER LEVELS	DEPTH IN FEET	SAMPLES	LITHOGRAPHIC COLUMN	DESCRIPTION	WELL DETAIL
1.5/1.5		5 11 18					SILTY SAND (SM), continued. @20.0': increasing gravel. GRAVELLY SAND (SW), dark grayish brown (10YR, 4/2); 10% low-plasticity fines; 60% fine to coarse sand, (F:M:C=2:1:1); 30% fine gravel; medium dense; moist.	
							SANDY CLAY (CL), dark grayish brown (10YR, 4/2); 75% medium-plasticity fines; 25% fine sand; stiff; moist.	
1.5/1.5	1.75	5 6 9		25				
1.5/1.5	2.25	5 6 10		30			@30.0': 70% medium-plasticity fines; 20% fine to coarse sand, (F:M:C=2:1:1); 10% fine to coarse gravel; stiff; moist.	
							GRAVELLY SAND (SW), dark grayish brown (10YR, 4/2); trace low-plasticity fines; 60% fine to coarse sand, (F:M:C=1:1:1); 40% fine to coarse gravel, subangular to subrounded; dense; moist.	
1.5/1.5		14 20 25		35				
				40				

EMCON

REMARKS

Boring drilled with 8" diameter hollow-stem auger. Samples were taken with a 2" diameter modified California split spoon sampler and a standard penetrometer. Boring converted to a 2" diameter polyvinyl chloride (PVC) groundwater monitoring well. See explanation sheet for definitions of symbols used in well detail and sample columns of this log

97-036

LOG OF EXPLORATORY BORING

PROJECT NUMBER: **22152-001.001**
BORING NO.: **MW-2**
PROJECT NAME: **Federal Realty Investment Trust**
PAGE: **3 of 4**
BY: **P. Christianson**
DATE: **12/19/96**
SURFACE ELEVATION: **133.00 ft.**

RECOVERY (ft/ft)	POCKET PENETRO-METER (tsf)	PENETRA-TION (blws/6")	GROUND WATER LEVELS	DEPTH IN FEET	DESCRIPTION
1.0/1.5		25 50			GRAVELLY SAND (SW), continued.
1.5/1.5		15 19 24		45	GRAVELLY SAND (SW), dark grayish brown (10YR, 4/2); 80% fine to coarse sand, (F:M:C=4:2:1); 20% fine to coarse gravel; dense; moist.
1.5/1.5		26 28 20		50	@50.0': 60% fine to coarse sand, (F:M:C=1:1:1); 40% fine to coarse gravel; dense; moist.
					SILTY SAND (SM), dark grayish brown (2.5Y, 4/2); 25% low-plasticity fines; 75% fine to medium sand, (F:M=4:1); dense; moist to wet on end of sample.
1.5/1.5		13 17 19		55	
			▼ 1/8/97		
					SANDY GRAVEL (GW), description on following page.
				60	

REMARKS
Boring drilled with 8" diameter hollow-stem auger. Samples were taken with a 2" diameter modified California split spoon sampler and a standard penetrometer. Boring converted to a 2" diameter polyvinyl chloride (PVC) groundwater monitoring well. See explanation sheet for definitions of symbols used in well detail and sample columns of this log

97 - 036

EMCON

LOG OF EXPLORATORY BORING

PROJECT NUMBER: **22152-001.001**	BORING NO.: **MW-2**
PROJECT NAME: **Federal Realty Investment Trust**	PAGE: **4 of 4**
BY: **P. Christianson** DATE: **12/18/96**	SURFACE ELEVATION: **133.00 ft.**

RECOVERY (ft/ft)	POCKET PENETROMETER (tsf)	PENETRATION (blws/6")	GROUND WATER LEVELS	DEPTH IN FEET	SAMPLES	LITHOGRAPHIC COLUMN	DESCRIPTION	WELL DETAIL
1.0/1.5		36 40 36	∇ 12/10/96				SANDY GRAVEL (GW), dark yellowish brown (10YR, 4/4); 35% fine to coarse sand, (F:M:C=2:1:1); 65% fine to coarse gravel; very dense; damp to moist.	
1.0/1.5		10 12 22		65			@65.0': dense; wet.	
							GRAVELLY SAND (SW), dark gray (10YR, 4/1); 80% fine to coarse sand, (F:M:C=3:2:1); 20% fine to coarse gravel; very dense; wet.	
1.5/1.5		25 30 40		70			BORING TERMINATED AT 70.0 FEET. BORING SAMPLED TO 71.5 FEET.	
				75				
				80				

REMARKS

Boring drilled with 8" diameter hollow-stem auger. Samples were taken with a 2" diameter modified California split spoon sampler and a standard penetrometer. Boring converted to a 2" diameter polyvinyl chloride (PVC) groundwater monitoring well. See explanation sheet for definitions of symbols used in well detail and sample columns of this log

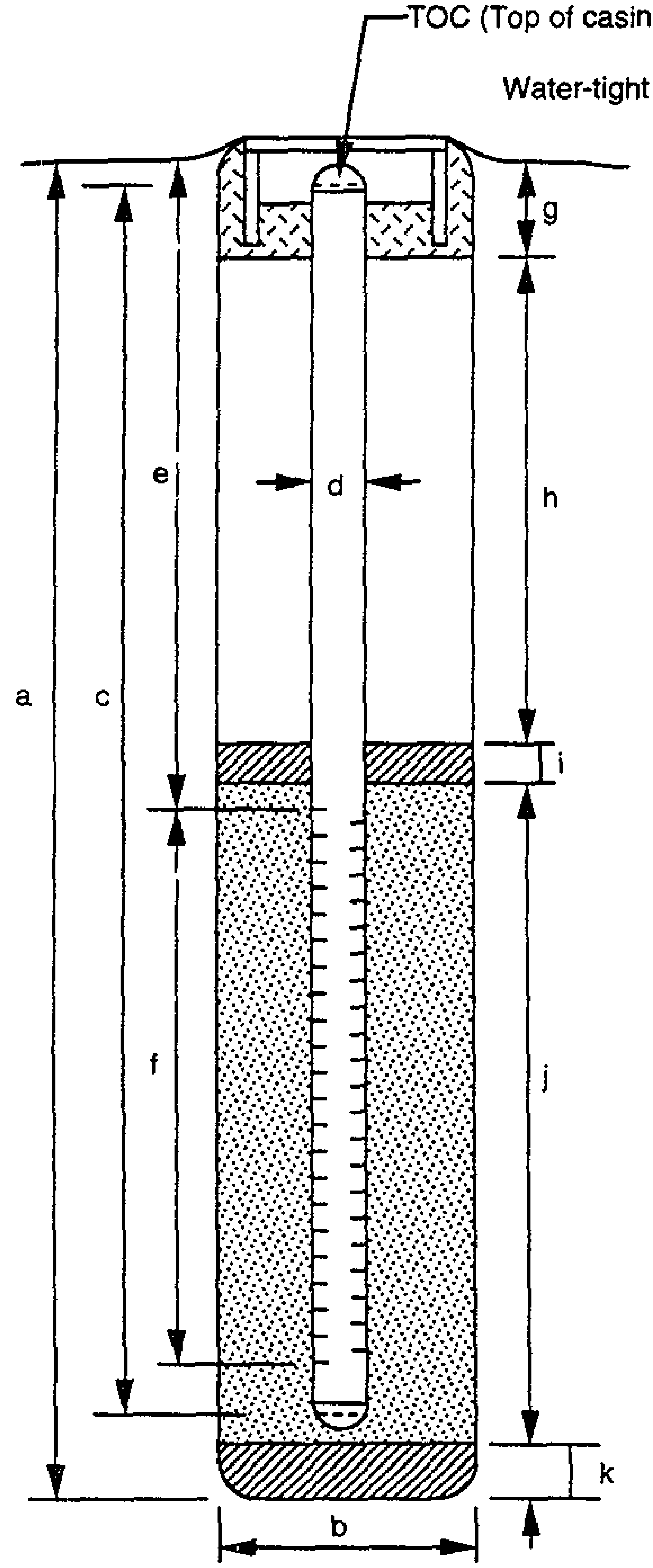
EMCON

WELL DETAILS

EMCON
ASSOCIATES

PROJECT NUMBER 22152-001.001
PROJECT NAME Federal Realty Investment Trust
LOCATION Town & Country Village Shopping Center
WELL PERMIT NO. 96W00900

BORING / WELL NO. MW-2
TOP OF CASING ELEV. 132.70
GROUND SURFACE ELEV. 133.00
DATUM M.S.L.
INSTALLATION DATE 12-19-96



EXPLORATORY BORING

a. Total depth 70.0 ft.
b. Diameter 8.0 in.
Drilling method Hollow Stem Auger

WELL CONSTRUCTION

c. Total casing length 70.0 ft.
Material Schedule 40 PVC
d. Diameter 2.0 in.
e. Depth to top perforations 50.0 ft.
f. Perforated length 20.0 ft.
Perforated interval from 50 to 70 ft.
Perforation type Machine Slotted
Perforation size 0.010 inch
g. Surface seal 1.0 ft.
Material Concrete
h. Backfill 45.0 ft.
Material Cement Slurry
i. Seal 2.0 ft.
Material Bentonite Pellets
j. Gravel pack 22.0 ft.
Gravel pack interval from 48.0 to 70.0 ft.
Material 2/12 Sand
k. Bottom seal/fill NA ft.
Material NA

97-036

Form prepared by P. Christianson

LOG OF EXPLORATORY BORING

PROJECT NUMBER: **22152-001.001**

BORING NO.: **MW-3**

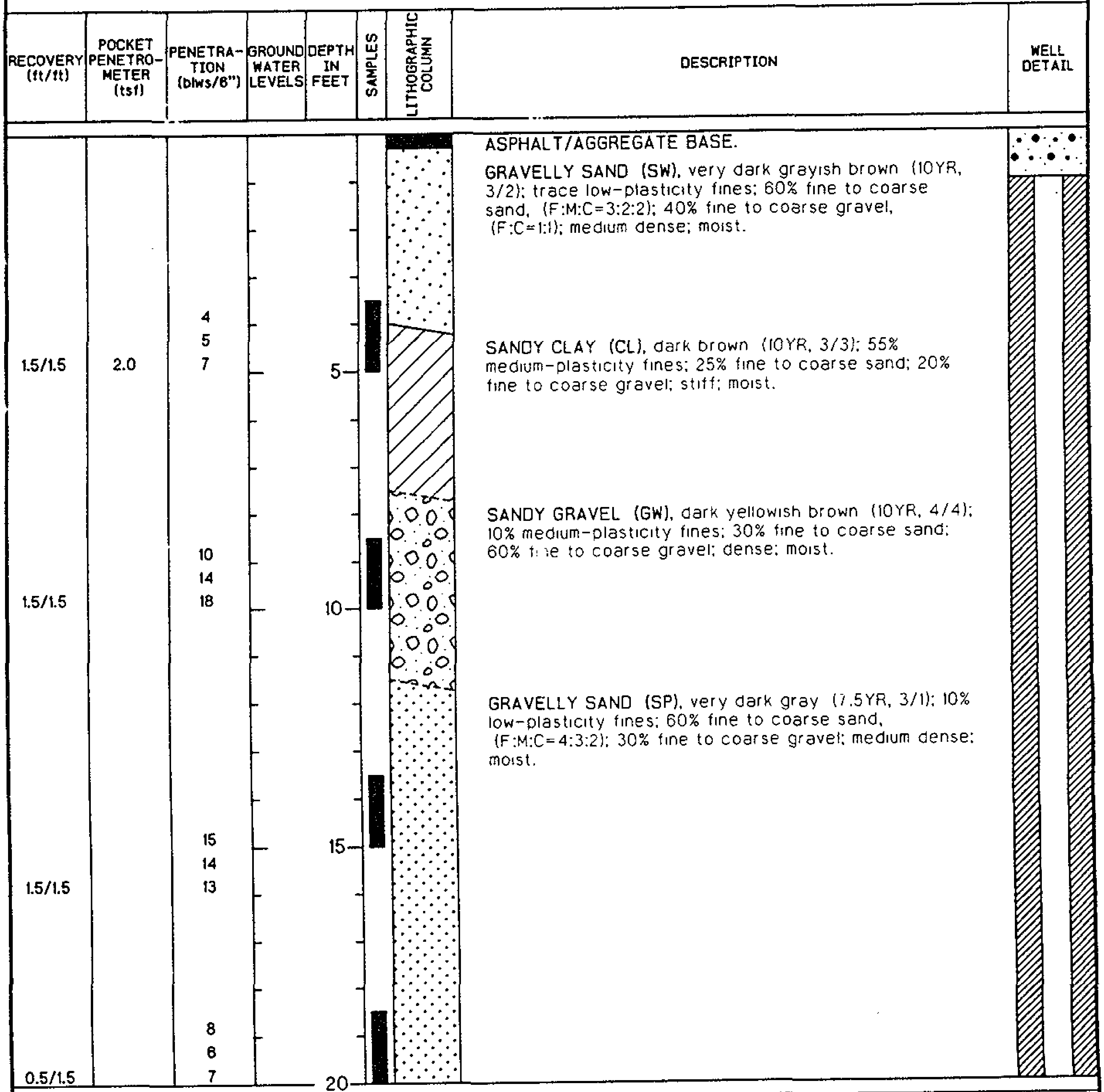
PROJECT NAME: **Federal Realty Investment Trust**

PAGE: **1 of 4**

BY: **P. Christianson**

DATE: **12/18/96**

SURFACE ELEVATION: **136.91 ft.**



RECOVERY (ft/ft)	POCKET PENETROMETER (tsf)	PENETRATION (blws/6")	GROUND WATER LEVELS	DEPTH IN FEET	SAMPLES	LITHOGRAPHIC COLUMN	DESCRIPTION	WELL DETAIL
							ASPHALT/AGGREGATE BASE.	
							GRAVELLY SAND (SW), very dark grayish brown (10YR, 3/2); trace low-plasticity fines; 60% fine to coarse sand, (F:M:C=3:2:2); 40% fine to coarse gravel, (F:C=1:1); medium dense; moist.	
1.5/1.5	2.0	4 5 7		5			SANDY CLAY (CL), dark brown (10YR, 3/3); 55% medium-plasticity fines; 25% fine to coarse sand; 20% fine to coarse gravel; stiff; moist.	
1.5/1.5		10 14 18		10			SANDY GRAVEL (GW), dark yellowish brown (10YR, 4/4); 10% medium-plasticity fines; 30% fine to coarse sand; 60% fine to coarse gravel; dense; moist.	
1.5/1.5		15 14 13		15			GRAVELLY SAND (SP), very dark gray (7.5YR, 3/1); 10% low-plasticity fines; 60% fine to coarse sand, (F:M:C=4:3:2); 30% fine to coarse gravel; medium dense; moist.	
0.5/1.5		8 6 7		20				

REMARKS

Boring drilled with 8" diameter hollow-stem auger. Samples were taken with a 2" diameter modified California split spoon sampler and a standard penetrometer. Boring converted to a 2" diameter polyvinyl chloride (PVC) groundwater monitoring well. See explanation sheet for definitions of symbols used in well detail and sample columns of this log

EMCON

97-036

LOG OF EXPLORATORY BORING

PROJECT NUMBER: **22152-001.001**

BORING NO.: **MW-3**

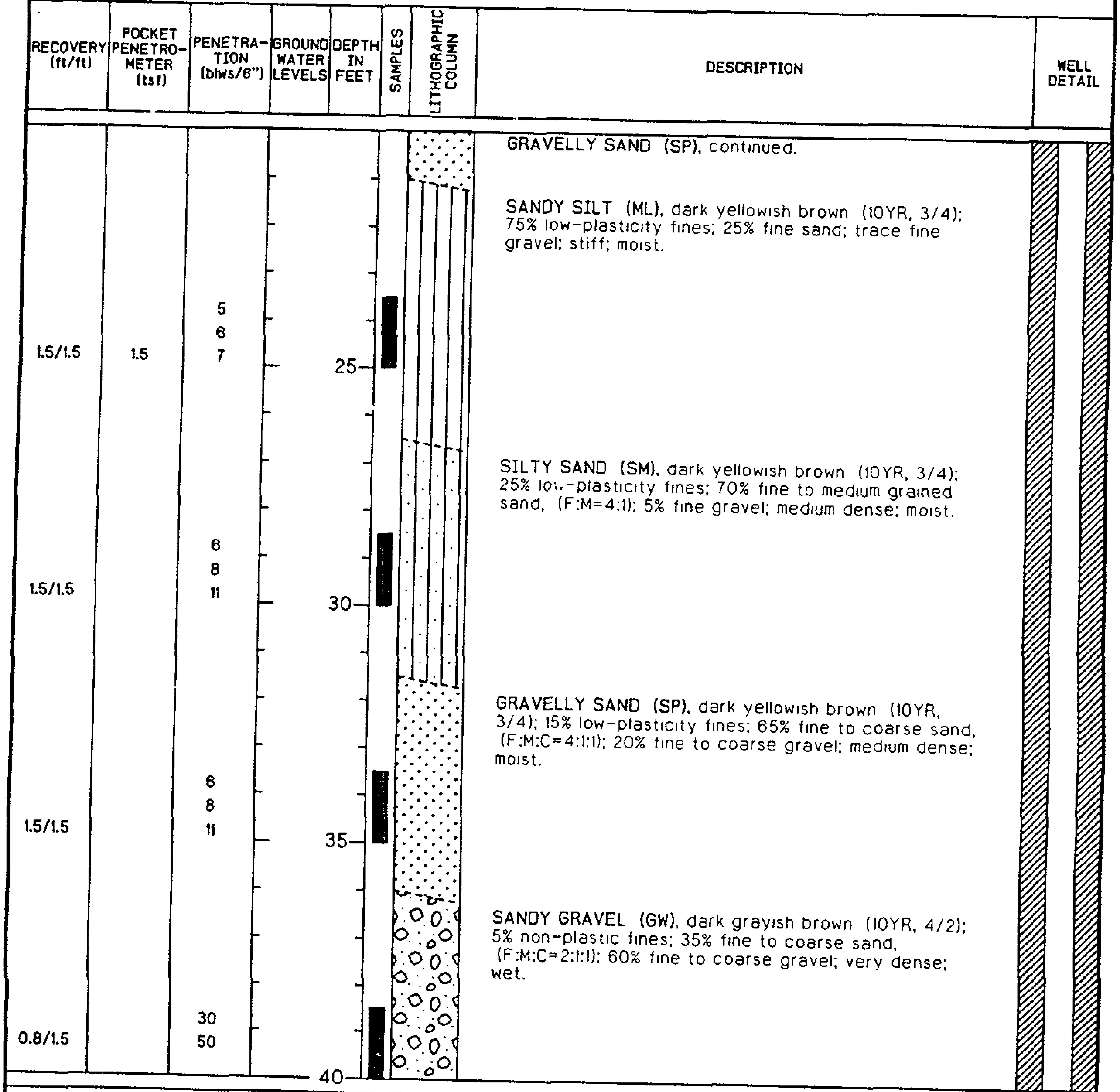
PROJECT NAME: **Federal Realty Investment Trust**

PAGE: **2 of 4**

BY: **P. Christianson**

DATE: **12/18/96**

SURFACE ELEVATION: **136.91 ft.**



RECOVERY (ft/ft)	POCKET PENETROMETER (tsf)	PENETRATION (blws/6")	GROUND WATER LEVELS	DEPTH IN FEET	DESCRIPTION
					GRAVELLY SAND (SP), continued.
					SANDY SILT (ML), dark yellowish brown (10YR, 3/4); 75% low-plasticity fines; 25% fine sand; trace fine gravel; stiff; moist.
1.5/1.5	1.5	5 6 7		25	
					SILTY SAND (SM), dark yellowish brown (10YR, 3/4); 25% low-plasticity fines; 70% fine to medium grained sand, (F:M=4:1); 5% fine gravel; medium dense; moist.
1.5/1.5		6 8 11		30	
					GRAVELLY SAND (SP), dark yellowish brown (10YR, 3/4); 15% low-plasticity fines; 65% fine to coarse sand, (F:M:C=4:1:1); 20% fine to coarse gravel; medium dense; moist.
1.5/1.5		6 8 11		35	
					SANDY GRAVEL (GW), dark grayish brown (10YR, 4/2); 5% non-plastic fines; 35% fine to coarse sand, (F:M:C=2:1:1); 60% fine to coarse gravel; very dense; wet.
0.8/1.5		30 50		40	

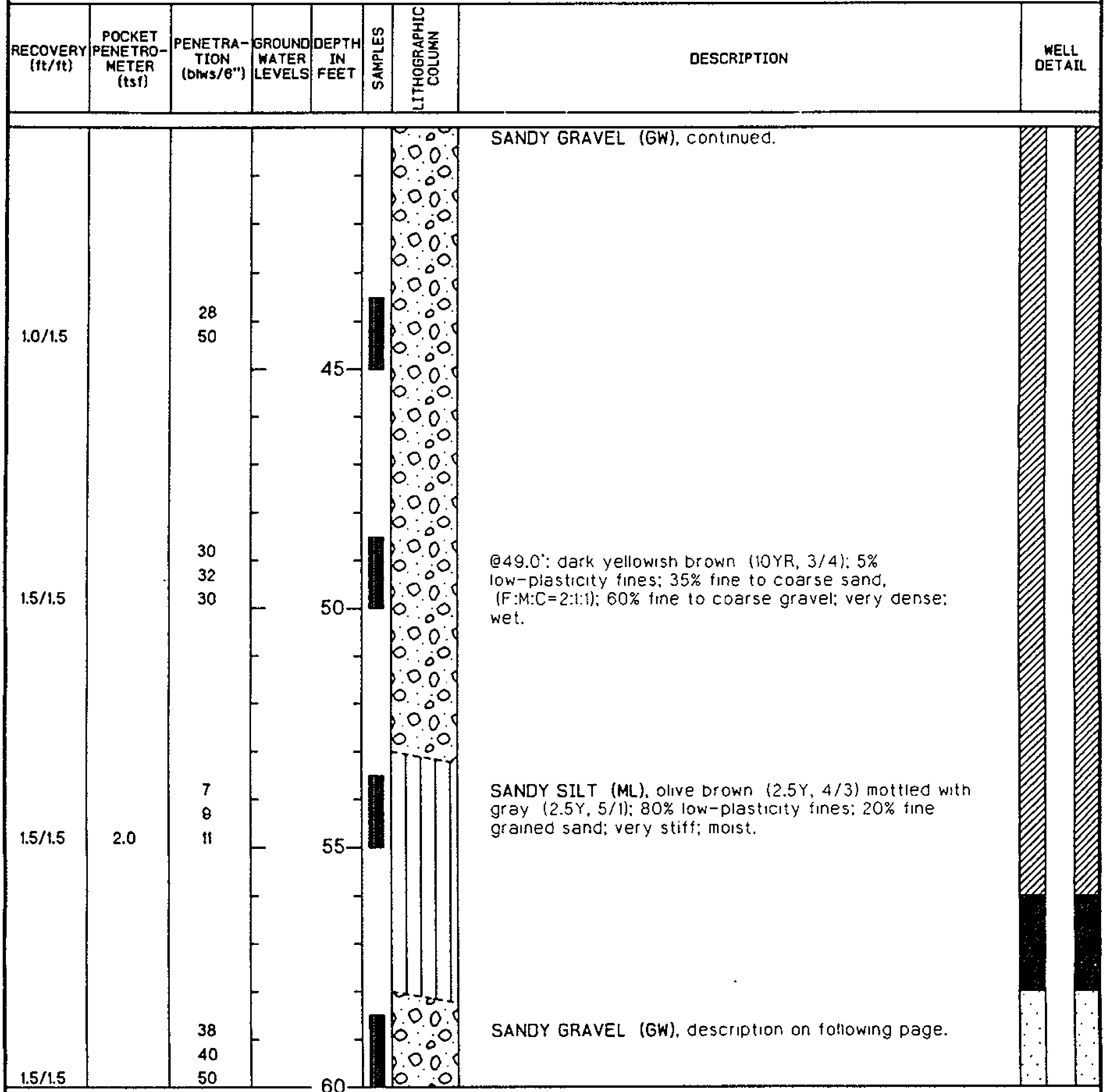
REMARKS

Boring drilled with 8" diameter hollow-stem auger. Samples were taken with a 2" diameter modified California split spoon sampler and a standard penetrometer. Boring converted to a 2" diameter polyvinyl chloride (PVC) groundwater monitoring well. See explanation sheet for definitions of symbols used in well detail and sample columns of this log

EMCON

LOG OF EXPLORATORY BORING

PROJECT NUMBER: **22152-001.001**
BORING NO.: **MW-3**
PROJECT NAME: **Federal Realty Investment Trust**
PAGE: **3 of 4**
BY: **P. Christianson**
DATE: **12/18/96**
SURFACE ELEVATION: **136.91 ft.**



RECOVERY (ft/ft)	POCKET PENETROMETER (tsf)	PENETRATION (blws/6")	GROUND WATER LEVELS	DEPTH IN FEET	SAMPLES	LITHOGRAPHIC COLUMN	DESCRIPTION	WELL DETAIL
							SANDY GRAVEL (GW), continued.	
1.0/1.5		28 50		45				
1.5/1.5		30 32 30		50			@49.0': dark yellowish brown (10YR, 3/4); 5% low-plasticity fines; 35% fine to coarse sand, (F:M:C=2:1:1); 60% fine to coarse gravel; very dense; wet.	
1.5/1.5	2.0	7 8 11		55			SANDY SILT (ML), olive brown (2.5Y, 4/3) mottled with gray (2.5Y, 5/1); 80% low-plasticity fines; 20% fine grained sand; very stiff; moist.	
1.5/1.5		38 40 50		60			SANDY GRAVEL (GW), description on following page.	

REMARKS
Boring drilled with 8" diameter hollow-stem auger. Samples were taken with a 2" diameter modified California split spoon sampler and a standard penetrometer. Boring converted to a 2" diameter polyvinyl chloride (PVC) groundwater monitoring well. See explanation sheet for definitions of symbols used in well detail and sample columns of this log

97 - 036

EMCON

LOG OF EXPLORATORY BORING

PROJECT NUMBER: **22152-001.001**

BORING NO.: **MW-3**

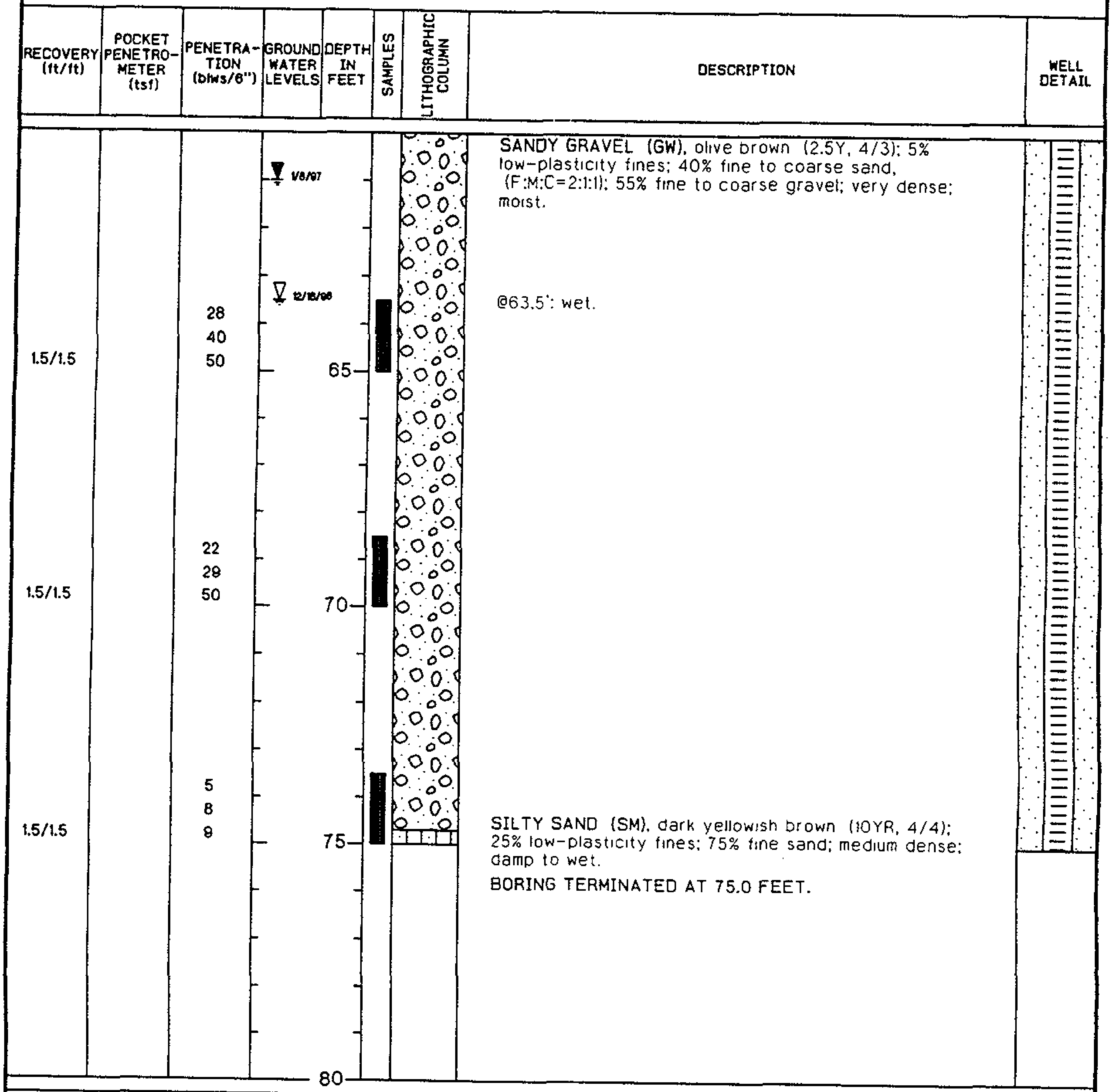
PROJECT NAME: **Federal Realty Investment Trust**

PAGE: **4 of 4**

BY: **P. Christianson**

DATE: **12/18/96**

SURFACE ELEVATION: **136.91 ft.**



RECOVERY (ft/ft)	POCKET PENETROMETER (tsf)	PENETRATION (blws/6")	GROUND WATER LEVELS	DEPTH IN FEET	SAMPLES	LITHOGRAPHIC COLUMN	DESCRIPTION	WELL DETAIL
			▼ 1/8/97				SANDY GRAVEL (GW), olive brown (2.5Y, 4/3); 5% low-plasticity fines; 40% fine to coarse sand, (F:M:C=2:1:1); 55% fine to coarse gravel; very dense; moist.	
			∇ 12/18/96				@63.5': wet.	
1.5/1.5		28 40 50		65				
1.5/1.5		22 29 50		70				
1.5/1.5		5 8 9		75			SILTY SAND (SM), dark yellowish brown (10YR, 4/4); 25% low-plasticity fines; 75% fine sand; medium dense; damp to wet. BORING TERMINATED AT 75.0 FEET.	
				80				

REMARKS

Boring drilled with 8" diameter hollow-stem auger. Samples were taken with a 2" diameter modified California split spoon sampler and a standard penetrometer. Boring converted to a 2" diameter polyvinyl chloride (PVC) groundwater monitoring well. See explanation sheet for definitions of symbols used in well detail and sample columns of this log

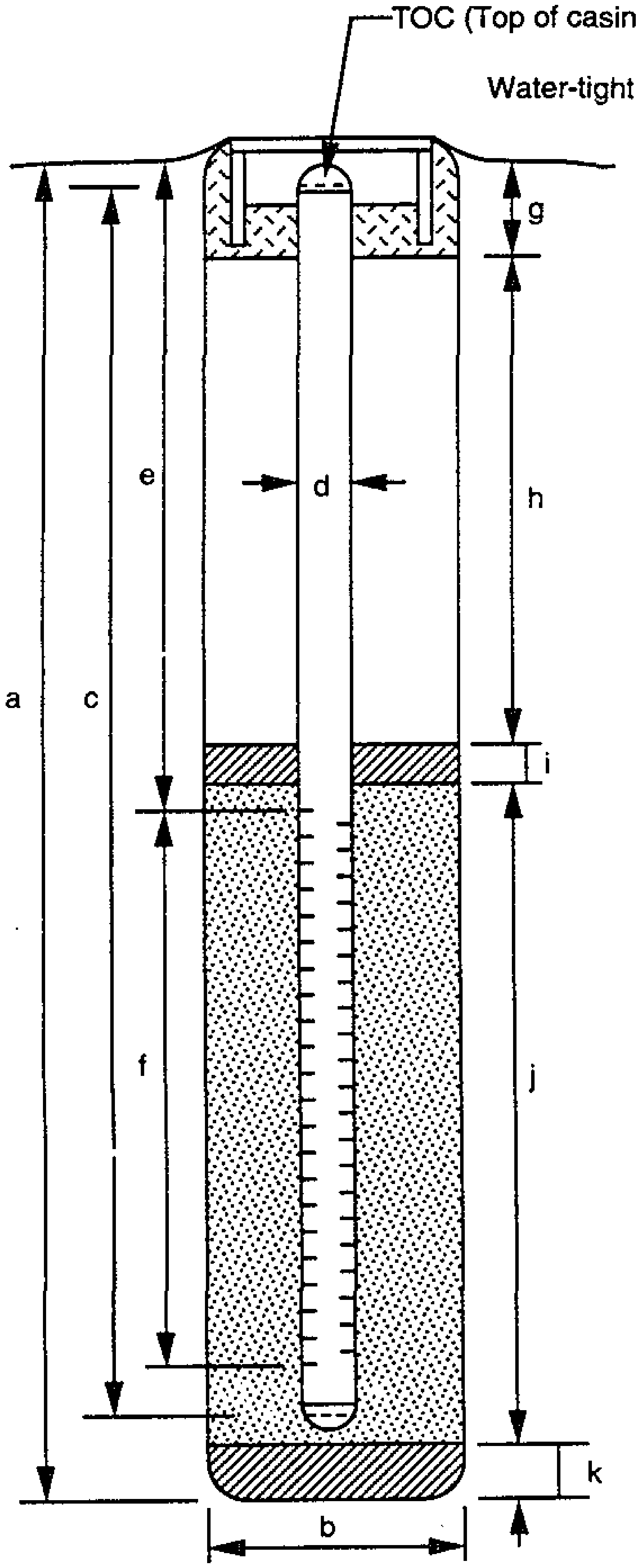
EMCON

97-036

WELL DETAILS

EMCON
ASSOCIATES

PROJECT NUMBER 22152-001.001
PROJECT NAME Federal Realty Investment Trust
LOCATION Town & Country Village Shopping Center
WELL PERMIT NO. 96W00901
BORING / WELL NO. MW-3
TOP OF CASING ELEV. 136.59
GROUND SURFACE ELEV. 136.91
DATUM M.S.L.
INSTALLATION DATE 12-18-96



EXPLORATORY BORING

a. Total depth 75.0 ft.
b. Diameter 8.0 in.
Drilling method Hollow Stem Auger

WELL CONSTRUCTION

c. Total casing length 75.0 ft.
Material Schedule 40 PVC
d. Diameter 2.0 in.
e. Depth to top perforations 60.0 ft.
f. Perforated length 15.0 ft.
Perforated interval from 60 to 75 ft.
Perforation type Machine Slotted
Perforation size 0.010 inch
g. Surface seal 1.0 ft.
Material Concrete
h. Backfill 55.0 ft.
Material Cement Slurry
i. Seal 2.0 ft.
Material Bentonite Pellets
j. *Gravel pack* 17.0 ft.
Gravel pack interval from 58.0 to 75.0 ft.
Material 2/12 Sand
k. Bottom seal/fill NA ft.
Material NA

97-036

Form prepared by R. Davis

EMCON ASSOCIATES

WELL DEVELOPMENT FIELD DATA SHEET

Project Number: 22152-001-001
Client: Federal Realty
Location: SAN JOSE, CA
Performed By: J Williams
Date: 12-31-96
Well ID: MW-1

Casing Diameter: ___ 2 inch ___ 3 inch ___ 4 inch ___ 4.5 inch ___ 6 inch Other___
Depth to Water (feet): Start 58.58 End 62.59
Well Total Depth (feet): Start 70.5 End 70.5
One Casing Volume at Start (gal): 1.94 Total Volume Purged (gal): 20

DEVELOPMENT METHOD

___ Centrifugal Pump
✓ Submersible Pump
___ Bailer (Teflon ®)
✓ Bailer (PVC)
✓ Surge Block (Swab)
___ Pneumatic Displacement Pump
Other___

FIELD INSTRUMENTS

✓ pH, EC, Temp. Meter
✓ NTU Meter
✓ Imhoff Cone
✓ Colorimeter
Other___

Purge Water Disposal Method: DRUMED ON SITE.

Date	Time	Cumulative Discharge (gal)	Temp. (° F)	E.C. @ 25° C (µmho/cm)	pH (Stnd)	Turbidity Visual Heavy Moderate Light Trace	Turbidity NTU Scale = 0 to 200	Color Visual Clear Cloudy Yellow Brown...	Color Cobalt Scale = 0 to 100	Odor	Settleable Solids (%)
12-31-96	1112	5	66.9	1076	6.93	HEAVY	>200	BROWN	>100	None	30-40
↓	1123	10	67.3	1059	7.07	↓	↓	↓	↓	↓	10-15
↓	1128	15	68.3	1142	7.00	↓	↓	↓	↓	↓	0-5
↓	1134	20	69.1	1140	7.01	↓	↓	↓	↓	↓	0-2

WELL INTEGRITY: GOOD LOCK #: 3616

REMARKS:
Sampled WELL After Development

97-036

SIGNATURE:

Page 1 of 3

Rev. 1, 4/90

WELL DEVELOPMENT FIELD DATA SHEET

EMCON ASSOCIATES

Project Number: 22152-001.001
Performed By: M. Gallegos
Client: Federal Realty Investment
Date: 12-20-96
Location: San Jose, CA
Well ID: MW-2

Casing Diameter: X 2 inch ___ 3 inch ___ 4 inch ___ 4.5 inch ___ 6 inch Other___
Depth to Water (feet): Start 61.92 End 61.93
Well Total Depth (feet): Start 69.52 End 69.55
One Casing Volume at Start (gal): 1.24 4.96
Total Volume Purged (gal): 20.0 gal

DEVELOPMENT METHOD

~~X Centrifugal Pump~~
___ Bailer (Teflon ®)
X Surge Block (Swab)
Other___
X Submersible Pump
X Bailer (PVC)
___ Pneumatic Displacement Pump
___

FIELD INSTRUMENTS

X pH, EC, Temp. Meter
X NTU Meter
X Imhoff Cone
X Colorimeter
Other___

Purge Water Disposal Method: Drummed on site

Date	Time	Cumulative Discharge (gal)	Temp. (° F)	E.C. @ 25° C (µmho/cm)	pH (Stnd)	Turbidity		Color		Odor	Settleable Solids (%)
						Visual Heavy Moderate Light Trace	NTU Scale = 0 to 200	Visual Clear Cloudy Yellow Brown...	Cobalt Scale = 0 to 100		
12/20/96	0909	5.0	59.4	1038	6.42	Heavy	>200	BRN	>100	none	50%
↓	0917	10.0	60.4	1051	6.81	↓	↓	↓	↓	↓	2%
	0919	15.0	61.8	1040	6.78						1%
	0922	20.0	62.5	1060	6.81	MOD	74.1		65/70		0%

WELL INTEGRITY: GOOD
LOCK #: 3500
REMARKS: *Swabbed well 20 prior to purging
Sampled well after purging

97-036

SIGNATURE:

Page 2 of 3

Rev. 1, 4/90

WELL DEVELOPMENT FIELD DATA SHEET

EMCON ASSOCIATES

Project Number: 22152-001.00/
Performed By: M. Galkgus
Client: Federal Realty Investment
Date: 12-20-96
Location: San Jose, CA
Well ID: MW-3

Casing Diameter: X 2 inch ___ 3 inch ___ 4 inch ___ 4.5 inch ___ 6 inch Other ___
Depth to Water (feet): Start 64.22 End 64.20
Well Total Depth (feet): Start 74.28 End 74.48
One Casing Volume at Start (gal): 1.64 6.56
Total Volume Purged (gal): 20.0

DEVELOPMENT METHOD

___ Centrifugal Pump
X Submersible Pump
___ Bailer (Teflon ®)
X Bailer (PVC)
X Surge Block (Swab)
___ Pneumatic Displacement Pump
Other ___

FIELD INSTRUMENTS

X pH, EC, Temp. Meter
X NTU Meter
X Imhoff Cone
X Colorimeter
Other ___

Purge Water Disposal Method: Drummed on site

Date	Time	Cumulative Discharge (gal)	Temp. (° F)	E.C. @ 25° C (µmho/cm)	pH (Stnd)	Turbidity		Color		Odor	Settleable Solids (%)
						Visual Heavy Moderate Light Trace	NTU Scale = 0 to 200	Visual Clear Cloudy Yellow Brown...	Cobalt Scale = 0 to 100		
12/20/96	1108	5.0	63.3	1074	7.00	Heavy	>200	BRown	>100	none	60%
	1117	10.0	64.0	1010	6.83						10%
	1120	15.0	65.1	1014	6.85	↓	↓		↓		1%
↓	1123	20.0	65.3	1013	6.88	mod	393	↓	45-50	↓	0%

WELL INTEGRITY: GOOD
LOCK #: ~~3900~~ 3616

REMARKS: Swabbed well For 20 min prior to purging.
Sanded well after purging

97 036

SIGNATURE:

Page ~~2~~ 3 of ~~2~~ 3

Rev. 1, 4/90

FIELD REPORT
WATER LEVEL / FLOATING PRODUCT
SURVEY

EMCON ASSOCIATES
1921 Ringwood Avenue
San Jose, California 95131
(408) 453-7300

PROJECT NO : 22152 - 01.01

LOCATION : TOWN + COUNTRY

DATE : 01/08/97

CLIENT :

SAMPLER : PETE CHRISTIANSON

DAY OF WEEK :

WELL ID	TOTAL DEPTH (Feet)	FIRST DTW (Feet)	SECOND DTW (Feet)	DEPTH TO FLOATING PRODUCT (Feet)	FLOATING PRODUCT THICKNESS (Feet)	COMMENTS
MW-1		57.43	57.43	—	—	
MW-2		58.71	58.71	—	—	
MW-3		61.31	61.31	—	—	

97-036

DTW = Depth to Water

APPENDIX D

LABORATORY REPORTS AND CHAIN-OF-CUSTODY DOCUMENTATION FOR SOIL SAMPLES

Columbia
Analytical
Services inc.

December 27, 1996

Service Request No.: S9602247

Mr. Mark Smolley
EMCON
1921 Ringwood Avenue
San Jose, CA 95131

RE: **Town & Country/22152-001.001**

Dear Mr. Smolley:

The following pages contain analytical results for sample(s) received by the laboratory on December 19, 1996. Results of sample analyses are followed by Appendix A which contains sample custody documentation and quality assurance deliverables requested for this project. The work requested has been assigned the Service Request No. listed above. To help expedite our service, please refer to this number when contacting the laboratory.

Analytical results were produced by procedures consistent with Columbia Analytical Services' (CAS) Quality Assurance Manual (with any deviations noted). Signature of this CAS Analytical Report below confirms that pages 2 through 11, following, have been thoroughly reviewed and approved for release in accord with CAS Standard Operating Procedure ADM-DatRev3.

Please feel welcome to contact me should you have questions or further needs.

Sincerely,

Cristina V. Rayburn

Steven L. Green
Project Chemist

2059 Junction Avenue ▪ San Jose, California 95131 ▪ Telephone 408/428-1280 ▪ Fax 408/437-9356

COLUMBIA ANALYTICAL SERVICES, Inc.
Acronyms

A2LA	American Association for Laboratory Accreditation
ASTM	American Society for Testing and Materials
BOD	Biochemical Oxygen Demand
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes
CAM	California Assessment Metals
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
COD	Chemical Oxygen Demand
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DLCS	Duplicate Laboratory Control Sample
DMS	Duplicate Matrix Spike
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
IC	Ion Chromatography
ICB	Initial Calibration Blank sample
ICP	Inductively Coupled Plasma atomic emission spectrometry
ICV	Initial Calibration Verification sample
J	Estimated concentration. The value is less than the MRL, but greater than or equal to the MDL. If the value is equal to the MRL, the result is actually <MRL before rounding.
LCS	Laboratory Control Sample
LUFT	Leaking Underground Fuel Tank
M	Modified
MBAS	Methylene Blue Active Substances
MCL	Maximum Contaminant Level. The highest permissible concentration of a substance allowed in drinking water as established by the U. S. EPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
MS	Matrix Spike
MTBE	Methyl tert-Butyl Ether
NA	Not Applicable
NAN	Not Analyzed
NC	Not Calculated
NCASI	National Council of the paper industry for Air and Stream Improvement
ND	Not Detected at or above the method reporting/detection limit (MRL/MDL)
NIOSH	National Institute for Occupational Safety and Health
NTU	Nephelometric Turbidity Units
ppb	Parts Per Billion
ppm	Parts Per Million
PQL	Practical Quantitation Limit
QA/QC	Quality Assurance/Quality Control
RCRA	Resource Conservation and Recovery Act
RPD	Relative Percent Difference
SIM	Selected Ion Monitoring
SM	Standard Methods for the Examination of Water and Wastewater, 18th Ed., 1992
STLC	Solubility Threshold Limit Concentration
SW	Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 3rd Ed., 1986 and as amended by Updates I, II, IIA, and IIB.
TCLP	Toxicity Characteristic Leaching Procedure
TDS	Total Dissolved Solids
TPH	Total Petroleum Hydrocarbons
tr	Trace level. The concentration of an analyte that is less than the PQL but greater than or equal to the MDL. If the value is equal to the PQL, the result is actually <PQL before rounding.
TRPH	Total Recoverable Petroleum Hydrocarbons
TSS	Total Suspended Solids
TTLC	Total Threshold Limit Concentration
VOA	Volatile Organic Analyte(s)

97-036

Analytical Report

Client: EMCON
Project: Town & Country/#22152-001.001
Sample Matrix: Soil

Service Request: L9605071
Date Collected: 12/18/96
Date Received: 12/19/96
Date Extracted: 12/24/96

Organochlorine Pesticides
EPA Methods 3550/8080
Units: mg/Kg (ppm)

	Sample Name:	**EB-8 @ 3.5'**
	Lab Code:	L9605071-001*
	Date Analyzed:	12/27/96
Analyte	**MRL**	
Alpha-BHC	0.01	<0.5
Gamma-BHC (Lindane)	0.01	<0.5
Beta-BHC	0.04	<2
Heptachlor	0.01	<0.5
Delta-BHC	0.01	<0.5
Aldrin	0.02	<1
Heptachlor Epoxide	0.01	<0.5
Endosulfan I	0.1	<5
4,4'-DDE	0.01	4.5
Dieldrin	0.01	<0.5
Endrin	0.05	<2.5
4,4'-DDD	0.01	1.0
Endosulfan II	0.01	<0.5
4,4'-DDT	0.02	4.9
Endrin Aldehyde	1.0	<50
Endosulfan Sulfate	0.5	<25
Methoxychlor	0.5	<25
Toxaphene	0.1	<5
Chlordane	0.1	<5

* MRL is elevated because of matrix interferences and because the sample required diluting.

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: EMCON
Project: Town & Country/#22152-001.001
Sample Matrix: Soil

Service Request: L9605071
Date Collected: 12/19/96
Date Received: 12/19/96
Date Extracted: 12/24/96

Organochlorine Pesticides
EPA Methods 3550/8080
Units: mg/Kg (ppm)

		Sample Name:	**EB-9 @ 1.5'**	**EB-9 @ 3.5'**	**EB-10 @ 1'**
		Lab Code:	L9605071-002*	L9605071-003	L9605071-004
		Date Analyzed:	12/27/96	12/26/96	12/26/96
Analyte	**MRL**				
Alpha-BHC	0.01		<0.5	ND	ND
Gamma-BHC (Lindane)	0.01		<0.5	ND	ND
Beta-BHC	0.04		<2	ND	ND
Heptachlor	0.01		<0.5	ND	ND
Delta-BHC	0.01		<0.5	ND	ND
Aldrin	0.02		<1	ND	ND
Heptachlor Epoxide	0.01		<0.5	ND	ND
Endosulfan I	0.1		<5	ND	ND
4,4'-DDE	0.01		7.5	0.54	2.8
Dieldrin	0.01		<0.5	ND	ND
Endrin	0.05		<2.5	ND	ND
4,4'-DDD	0.01		1.1	0.04	0.42
Endosulfan II	0.01		<0.5	ND	ND
4,4'-DDT	0.02		2.0	0.05	0.58
Endrin Aldehyde	1.0		<50	ND	ND
Endosulfan Sulfate	0.5		<25	ND	ND
Methoxychlor	0.5		<25	ND	ND
Toxaphene	0.1		<5	ND	ND
Chlordane	0.1		<5	ND	ND

* MRL is elevated because of matrix interferences and because the sample required diluting.

COLUMBI ANALYTICAL SERVICES, INC.

Analytical Report

Client: EMCON
Project: Town & Country/#22152-001.001
Sample Matrix: Soil

Service Request: L9605071
Date Collected: 12/19/96
Date Received: 12/19/96
Date Extracted: 12/24/96

Organochlorine Pesticides
EPA Methods 3550/8080
Units: mg/Kg (ppm)

		Sample Name:	**EB-10 @ 3'**	**MW2 @ 1'**	**MW-2 @ 3'**
		Lab Code:	L9605071-005	L9605071-006	L9605071-007
		Date Analyzed:	12/26/96	12/26/96	12/26/96
Analyte	**MRL**				
Alpha-BHC	0.01		ND	ND	ND
Gamma-BHC (Lindane)	0.01		ND	ND	ND
Beta-BHC	0.04		ND	ND	ND
Heptachlor	0.01		ND	ND	ND
Delta-BHC	0.01		ND	ND	ND
Aldrin	0.02		ND	ND	ND
Heptachlor Epoxide	0.01		ND	ND	ND
Endosulfan I	0.1		ND	ND	ND
4,4'-DDE	0.01		0.04	ND	ND
Dieldrin	0.01		ND	ND	ND
Endrin	0.05		ND	ND	ND
4,4'-DDD	0.01		ND	ND	ND
Endosulfan II	0.01		ND	ND	ND
4,4'-DDT	0.02		ND	ND	ND
Endrin Aldehyde	1.0		ND	ND	ND
Endosulfan Sulfate	0.5		ND	ND	ND
Methoxychlor	0.5		ND	ND	ND
Toxaphene	0.1		ND	ND	ND
Chlordane	0.1		ND	ND	ND

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	EMCON	**Service Request:**	L9605071
Project:	Town & Country/#22152-001.001	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
		Date Extracted:	12/24/96

Organochlorine Pesticides
EPA Methods 3550/8080
Units: mg/Kg (ppm)

		Sample Name:	**Method Blank**
		Lab Code:	L961224-MB
		Date Analyzed:	12/26/96
Analyte	**MRL**		
Alpha-BHC	0.01		ND
Gamma-BHC (Lindane)	0.01		ND
Beta-BHC	0.04		ND
Heptachlor	0.01		ND
Delta-BHC	0.01		ND
Aldrin	0.02		ND
Heptachlor Epoxide	0.01		ND
Endosulfan I	0.1		ND
4,4'-DDE	0.01		ND
Dieldrin	0.01		ND
Endrin	0.05		ND
4,4'-DDD	0.01		ND
Endosulfan II	0.01		ND
4,4'-DDT	0.02		ND
Endrin Aldehyde	1.0		ND
Endosulfan Sulfate	0.5		ND
Methoxychlor	0.5		ND
Toxaphene	0.1		ND
Chlordane	0.1		ND

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: EMCON
Project: Town & Country/22152-001.001
Sample Matrix: Soil

Service Request: S9602247
Date Collected: 12/19/96
Date Received: 12/19/96
Date Digested: 12/21/96

Metals
Units: mg/Kg (ppm)

		Sample Name:	**EB-8 @ 3.5'**	**EB-9 @ 1.5'**	**EB-9 @ 3.5'**
		Lab Code:	S9602247-001	S9602247-002	S9602247-003
		Date Analyzed:	12/22/96	12/22/96	12/22/96
Analyte	**EPA Method**	**MRL**			
Arsenic	3050BM/7060	5	75	90	63
Lead	3050BM/6010A	5	110	130	24

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	EMCON	**Service Request:**	S9602247
Project:	Town & Country/22152-001.001	**Date Collected:**	12/19/96
Sample Matrix:	Soil	**Date Received:**	12/19/96
		Date Digested:	12/21/96

Metals
Units: mg/Kg (ppm)

		Sample Name:	**EB-10 @ 1'**	**EB-10 @ 3'**	**MW-2 @ 1'**
		Lab Code:	S9602247-004	S9602247-005	S9602247-006
		Date Analyzed:	12/22/96	12/22/96	12/22/96
Analyte	**EPA Method**	**MRL**			
Arsenic	3050BM/7060	5	110	61	470
Lead	3050BM/6010A	5	220	15	91

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	EMCON	**Service Request:**	S9602247
Project:	Town & Country/22152-001.001	**Date Collected:**	12/19/96
Sample Matrix:	Soil	**Date Received:**	12/19/96
		Date Digested:	12/21/96

Metals
Units: mg/Kg (ppm)

		Sample Name:	**MW-2 @ 3'**	**Method Blank**
		Lab Code:	S9602247-007	S9602247-MB1
		Date Analyzed:	12/22/96	12/22/96
Analyte	**EPA Method**	**MRL**		
Arsenic	3050BM/7060	5	400	ND
Lead	3050BM/6010A	5	96	ND

97-036

APPENDIX A

Columbia Analytical Services inc
2059 Junction Avenue • San Jose, CA 95131 • (408) 428-1280 • FAX (408) 437-9356

CHAIN OF CUSTODY/LABORATORY ANALYSIS REPORT FORM

SERVICE REQUEST NO. S9602247 P.O.# ______ PAGE 1 OF 1

PROJECT NAME Town & Country # 22152-01.01
PROJECT MGR. Mark Smolley
COMPANY/ADDRESS Emcon, SJ
PHONE ______
FAX ______
SAMPLERS SIGNATURE Pete Christ

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	NUMBER OF CONTAINERS	Base/Neu/Acid Organics GC/MS 625/8270	Volatile Organics GC/MS 624/8240/8260	Halogenated or Aromatic Volatiles 601/8010 ☐ 602/8020 ☐	TPH as Gas/BTEX DHS LUFT / 8020	TPH as Diesel/HBHC DHS LUFT	TRPH - 418.1	Oil and Grease Method	Metals (total or dissolved) List Below Pb As	pH, Cond, Cl, SO4, F, TDS, TSS Alk (circle)	NH3-N, COD, Total-P, TKN, NO3 / NO2 (circle)	Total Organic Carbon TOC	Total Phenols	Chlorinated Pesticides				REMARKS
PRESERVATIVE						NP	HCl	HCl	HCl	NP	HCl	HCl	HNO3	NP	H_2SO_4	H_2SO_4	H_2SO_4					
EB-8 @ 3.5	12/18/96		1	Soil	1								X					X				
EB-9 @ 1.5'	12/19/96		2	↓	↓								↓					↓				
EB-9 @ 3.5'	↓		3	↓	↓								↓					↓				
EB-10 @ 1'	↓		4	↓	↓								↓					↓				
EB-10 @ 3'	↓		5	↓	↓								↓					↓				
MW-2 @ 1'	↓		6	↓	↓								↓					↓				
MW-2 @ 3'	↓		7	↓	↓								↓					↓				
																						R20/S29

97 036

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature Pete Christ	Signature Robert K. Davis	Signature Robert K. Davis	Signature Joanne Brown
Printed Name Pete Christiansen	Printed Name ROB DAVIS	Printed Name ROB DAVIS	Printed Name Joanne Brown
Firm EMCON	Firm EMCON	Firm EMCON	Firm CAS
Date/Time 12/19/96 1330	Date/Time 12/19/96 13:30	Date/Time 12/19/96 14:10	Date/Time 12-19-96 14:10

TURNAROUND REQUIREMENTS
__ 24 hr __ 48 hr. X [✓ 5 day]
__ Standard (10-15 working days)
__ Provide Verbal Preliminary Results
__ Provide FAX preliminary Results
Requested Report Date 12-27

REPORT REQUIREMENTS
X I. Routine Report
__ II. Report (includes DUP MAS MSD, as required, may be charged as samples)
__ III. Data Validation Report (includes All Raw Data)
__ RWQCB (MDLs/PQLs/TRACE#)

RELINQUISHED BY:	RECEIVED BY:
Signature	Signature
Printed Name	Printed Name
Firm	Firm
Date/Time	Date/Time

SPECIAL INSTRUCTIONS/COMMENTS:

Circle which metals are to be analyzed:

Metals: Al Sb Ba Be B Cd Ca Cr Cu Co Fe Mg Mn Mo Ni K Ag Na Sn V Zn [✓ As] [✓ Pb] Se Tl Hg

DISTRIBUTION: WHITE - return to originator; YELLOW - lab; PINK - retained by originator

400 5

Columbia
Analytical
Services inc.

December 26, 1996 Service Request No.: S9602230

Mr. Mark Smolley
EMCON
1921 Ringwood Avenue
San Jose, CA 95131

RE: Town & Country/22152-001.001

Dear Mr. Smolley:

The following pages contain analytical results for sample(s) received by the laboratory on December 18, 1996. Results of sample analyses are followed by Appendix A which contains sample custody documentation and quality assurance deliverables requested for this project. The work requested has been assigned the Service Request No. listed above. To help expedite our service, please refer to this number when contacting the laboratory.

Analytical results were produced by procedures consistent with Columbia Analytical Services' (CAS) Quality Assurance Manual (with any deviations noted). Signature of this CAS Analytic Report below confirms that pages 2 through 21, following, have been thoroughly reviewed an approved for release in accord with CAS Standard Operating Procedure ADM-DatRev3.

Please feel welcome to contact me should you have questions or further needs.

Sincerely.

Cristina V. Raylen for

Steven L. Green
Project Chemist

97-036

2059 Junction Avenue ▪ San Jose, California 95131 ▪ Telephone 408/428-1280 ▪ Fax 408/437-9356

COLUMBIA ANALYTICAL SERVICES, Inc.

Acronyms

A2LA	American Association for Laboratory Accreditation
ASTM	American Society for Testing and Materials
BOD	Biochemical Oxygen Demand
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes
CAM	California Assessment Metals
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
COD	Chemical Oxygen Demand
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DLCS	Duplicate Laboratory Control Sample
DMS	Duplicate Matrix Spike
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
IC	Ion Chromatography
ICB	Initial Calibration Blank sample
ICP	Inductively Coupled Plasma atomic emission spectrometry
ICV	Initial Calibration Verification sample
J	Estimated concentration. The value is less than the MRL, but greater than or equal to the MDL. If the value is equal to the MRL, the result is actually <MRL before rounding.
LCS	Laboratory Control Sample
LUFT	Leaking Underground Fuel Tank
M	Modified
MBAS	Methylene Blue Active Substances
MCL	Maximum Contaminant Level. The highest permissible concentration of a substance allowed in drinking water as established by the U. S. EPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
MS	Matrix Spike
MTBE	Methyl tert-Butyl Ether
NA	Not Applicable
NAN	Not Analyzed
NC	Not Calculated
NCASI	National Council of the paper industry for Air and Stream Improvement
ND	Not Detected at or above the method reporting/detection limit (MRL/MDL)
NIOSH	National Institute for Occupational Safety and Health
NTU	Nephelometric Turbidity Units
ppb	Parts Per Billion
ppm	Parts Per Million
PQL	Practical Quantitation Limit
QA/QC	Quality Assurance/Quality Control
RCRA	Resource Conservation and Recovery Act
RPD	Relative Percent Difference
SIM	Selected Ion Monitoring
SM	Standard Methods for the Examination of Water and Wastewater, 18th Ed., 1992
STLC	Solubility Threshold Limit Concentration
SW	Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 3rd Ed., 1986 and as amended by Updates I, II, IIA, and IIB.
TCLP	Toxicity Characteristic Leaching Procedure
TDS	Total Dissolved Solids
TPH	Total Petroleum Hydrocarbons
tr	Trace level. The concentration of an analyte that is less than the PQL but greater than or equal to the MDL. If the value is equal to the PQL, the result is actually <PQL before rounding.
TRPH	Total Recoverable Petroleum Hydrocarbons
TSS	Total Suspended Solids
TTLC	Total Threshold Limit Concentration
VOA	Volatile Organic Analyte(s)

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	EMCON	**Service Request:**	S9602230
Project:	Town & Country/22152-001.001	**Date Collected:**	12/17-18/96
Sample Matrix:	Soil	**Date Received:**	12/18/96
		Date Extracted:	12/19/96

Halogenated Volatile Organic Compounds
EPA Methods 5030/8010
Units: mg/Kg (ppm)
As Received Basis

		Sample Name:	**EB-1 @1'**	**EB-1 @3'**	**EB-2 @1'**
		Lab Code:	S9602230-001	S9602230-002	S9602230-003
		Date Analyzed:	12/19/96	12/20/96	12/20/96
Analyte	**MRL**				
Dichlorodifluoromethane (CFC 12)	0.1		ND	ND	ND
Chloromethane	0.1		ND	ND	ND
Vinyl Chloride	0.05		ND	ND	ND
Bromomethane	0.05		ND	ND	ND
Chloroethane	0.05		ND	ND	ND
Trichlorofluoromethane (CFC 11)	0.05		ND	ND	ND
1,1-Dichloroethene	0.05		ND	ND	ND
Trichlorotrifluoroethane (CFC 113)	0.05		ND	ND	ND
Methylene Chloride	0.05		ND	ND	ND
trans-1,2-Dichloroethene	0.05		ND	ND	ND
cis-1,2-Dichloroethene	0.05		ND	ND	ND
1,1-Dichloroethane	0.05		ND	ND	ND
Chloroform	0.05		ND	ND	ND
1,1,1-Trichloroethane (TCA)	0.05		ND	ND	ND
Carbon Tetrachloride	0.05		ND	ND	ND
1,2-Dichloroethane	0.05		ND	ND	ND
Trichloroethene (TCE)	0.05		ND	ND	ND
1,2-Dichloropropane	0.05		ND	ND	ND
Bromodichloromethane	0.05		ND	ND	ND
2-Chloroethyl Vinyl Ether	0.5		ND	ND	ND
trans-1,3-Dichloropropene	0.05		ND	ND	ND
cis-1,3-Dichloropropene	0.05		ND	ND	ND
1,1,2-Trichloroethane	0.05		ND	ND	ND
Tetrachloroethene (PCE)	0.05		0.12	0.31	0.07
Dibromochloromethane	0.05		ND	ND	ND
Chlorobenzene	0.05		ND	ND	ND
Bromoform	0.05		ND	ND	ND
1,1,2,2-Tetrachloroethane	0.05		ND	ND	ND
1,3-Dichlorobenzene	0.1		ND	ND	ND
1,4-Dichlorobenzene	0.1		ND	ND	ND
1,2-Dichlorobenzene	0.1		ND	ND	ND

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COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: EMCON
Project: Town & Country/22152-001.001
Sample Matrix: Soil

Service Request: S9602230
Date Collected: 12/17-18/96
Date Received: 12/18/96
Date Extracted: 12/19/96

Halogenated Volatile Organic Compounds
EPA Methods 5030/8010
Units: mg/Kg (ppm)
As Received Basis

	Sample Name:	**EB-2 @3'**	**EB-6 @1'**	**EB-6 @3'**
	Lab Code:	S9602230-004	S9602230-010	S9602230-011
	Date Analyzed:	12/20/96	12/20/96	12/20/96
Analyte	**MRL**			
Dichlorodifluoromethane (CFC 12)	0.1	ND	ND	ND
Chloromethane	0.1	ND	ND	ND
Vinyl Chloride	0.05	ND	ND	ND
Bromomethane	0.05	ND	ND	ND
Chloroethane	0.05	ND	ND	ND
Trichlorofluoromethane (CFC 11)	0.05	ND	ND	ND
1,1-Dichloroethene	0.05	ND	ND	ND
Trichlorotrifluoroethane (CFC 113)	0.05	ND	ND	ND
Methylene Chloride	0.05	ND	ND	ND
trans-1,2-Dichloroethene	0.05	ND	ND	ND
cis-1,2-Dichloroethene	0.05	ND	ND	ND
1,1-Dichloroethane	0.05	ND	ND	ND
Chloroform	0.05	ND	ND	ND
1,1,1-Trichloroethane (TCA)	0.05	ND	ND	ND
Carbon Tetrachloride	0.05	ND	ND	ND
1,2-Dichloroethane	0.05	ND	ND	ND
Trichloroethene (TCE)	0.05	ND	ND	ND
1,2-Dichloropropane	0.05	ND	ND	ND
Bromodichloromethane	0.05	ND	ND	ND
2-Chloroethyl Vinyl Ether	0.5	ND	ND	ND
trans-1,3-Dichloropropene	0.05	ND	ND	ND
cis-1,3-Dichloropropene	0.05	ND	ND	ND
1,1,2-Trichloroethane	0.05	ND	ND	ND
Tetrachloroethene (PCE)	0.05	0.13	ND	ND
Dibromochloromethane	0.05	ND	ND	ND
Chlorobenzene	0.05	ND	ND	ND
Bromoform	0.05	ND	ND	ND
1,1,2,2-Tetrachloroethane	0.05	ND	ND	ND
1,3-Dichlorobenzene	0.1	ND	ND	ND
1,4-Dichlorobenzene	0.1	ND	ND	ND
1,2-Dichlorobenzene	0.1	ND	ND	ND

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3S44/060194

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: EMCON
Project: Town & Country/22152-001.001
Sample Matrix: Soil

Service Request: S9602230
Date Collected: 12/17-18/96
Date Received: 12/18/96
Date Extracted: 12/19/96

Halogenated Volatile Organic Compounds
EPA Methods 5030/8010
Units: mg/Kg (ppm)
As Received Basis

		Sample Name:	**MW-3 @58-60'**	**Method Blank**
		Lab Code:	S9602230-13	S961219-SB1
		Date Analyzed:	12/20/96	12/19/96
Analyte	**MRL**			
Dichlorodifluoromethane (CFC 12)	0.1		ND	ND
Chloromethane	0.1		ND	ND
Vinyl Chloride	0.05		ND	ND
Bromomethane	0.05		ND	ND
Chloroethane	0.05		ND	ND
Trichlorofluoromethane (CFC 11)	0.05		ND	ND
1,1-Dichloroethene	0.05		ND	ND
Trichlorotrifluoroethane (CFC 113)	0.05		ND	ND
Methylene Chloride	0.05		ND	ND
trans-1,2-Dichloroethene	0.05		ND	ND
cis-1,2-Dichloroethene	0.05		ND	ND
1,1-Dichloroethane	0.05		ND	ND
Chloroform	0.05		ND	ND
1,1,1-Trichloroethane (TCA)	0.05		ND	ND
Carbon Tetrachloride	0.05		ND	ND
1,2-Dichloroethane	0.05		ND	ND
Trichloroethene (TCE)	0.05		ND	ND
1,2-Dichloropropane	0.05		ND	ND
Bromodichloromethane	0.05		ND	ND
2-Chloroethyl Vinyl Ether	0.5		ND	ND
trans-1,3-Dichloropropene	0.05		ND	ND
cis-1,3-Dichloropropene	0.05		ND	ND
1,1,2-Trichloroethane	0.05		ND	ND
Tetrachloroethene (PCE)	0.05		ND	ND
Dibromochloromethane	0.05		ND	ND
Chlorobenzene	0.05		ND	ND
Bromoform	0.05		ND	ND
1,1,2,2-Tetrachloroethane	0.05		ND	ND
1,3-Dichlorobenzene	0.1		ND	ND
1,4-Dichlorobenzene	0.1		ND	ND
1,2-Dichlorobenzene	0.1		ND	ND

97-036

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: EMCON
Project: Town & Country/#22152-001.001
Sample Matrix: Soil

Service Request: L9605032
Date Collected: 12/17/96
Date Received: 12/18/96
Date Extracted: 12/21/96

Organochlorine Pesticides
EPA Methods 3550/8080
Units: mg/Kg (ppm)

		Sample Name:	**EB-3@1'**	**EB-3@3'**	**EB-4@1'**
		Lab Code:	L9605032-001	L9605032-002	L9605032-003
		Date Analyzed:	12/23/96	12/23/96	12/23/96
Analyte	**MRL**				
Alpha-BHC	0.01		ND	ND	ND
Gamma-BHC (Lindane)	0.01		ND	ND	ND
Beta-BHC	0.04		ND	ND	ND
Heptachlor	0.01		ND	ND	ND
Delta-BHC	0.01		ND	ND	ND
Aldrin	0.02		ND	ND	ND
Heptachlor Epoxide	0.01		ND	ND	ND
Endosulfan I	0.1		ND	ND	ND
4,4'-DDE	0.01		ND	ND	0.16
Dieldrin	0.01		ND	ND	ND
Endrin	0.05		ND	ND	ND
4,4'-DDD	0.01		ND	ND	0.03
Endosulfan II	0.01		ND	ND	ND
4,4'-DDT	0.02		ND	ND	0.05
Endrin Aldehyde	1.0		ND	ND	ND
Endosulfan Sulfate	0.5		ND	ND	ND
Methoxychlor	0.5		ND	ND	ND
Toxaphene	0.1		ND	ND	ND
Chlordane	0.1		ND	ND	ND

97-036

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: EMCON
Project: Town & Country/#22152-001.001
Sample Matrix: Soil

Service Request: L9605032
Date Collected: 12/17/96
Date Received: 12/18/96
Date Extracted: 12/21/96

Organochlorine Pesticides
EPA Methods 3550/8080
Units: mg/Kg (ppm)

		Sample Name:	**EB-4@3'**	**EB-5@1'**	**EB-6@1'**
		Lab Code:	L9605032-004	L9605032-005	L9605032-006
		Date Analyzed:	12/23/96	12/23/96	12/23/96
Analyte	**MRL**				
Alpha-BHC	0.01		ND	ND	ND
Gamma-BHC (Lindane)	0.01		ND	ND	ND
Beta-BHC	0.04		ND	ND	ND
Heptachlor	0.01		ND	ND	ND
Delta-BHC	0.01		ND	ND	ND
Aldrin	0.02		ND	ND	ND
Heptachlor Epoxide	0.01		ND	ND	ND
Endosulfan I	0.1		ND	ND	ND
4,4'-DDE	0.01		ND	0.49	ND
Dieldrin	0.01		ND	ND	ND
Endrin	0.05		ND	ND	ND
4,4'-DDD	0.01		ND	0.09	ND
Endosulfan II	0.01		ND	ND	ND
4,4'-DDT	0.02		ND	ND	ND
Endrin Aldehyde	1.0		ND	ND	ND
Endosulfan Sulfate	0.5		ND	ND	ND
Methoxychlor	0.5		ND	ND	ND
Toxaphene	0.1		ND	ND	ND
Chlordane	0.1		ND	ND	ND

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COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	EMCON	**Service Request:**	L9605032
Project:	Town & Country/#22152-001.001	**Date Collected:**	12/17/96
Sample Matrix:	Soil	**Date Received:**	12/18/96
		Date Extracted:	12/21/96

Organochlorine Pesticides
EPA Methods 3550/8080
Units: mg/Kg (ppm)

Analyte	**MRL**	Sample Name: **EB-6@3'** Lab Code: L9605032-007 Date Analyzed: 12/23/96
Alpha-BHC	0.01	ND
Gamma-BHC (Lindane)	0.01	ND
Beta-BHC	0.04	ND
Heptachlor	0.01	ND
Delta-BHC	0.01	ND
Aldrin	0.02	ND
Heptachlor Epoxide	0.01	ND
Endosulfan I	0.1	ND
4,4'-DDE	0.01	ND
Dieldrin	0.01	ND
Endrin	0.05	ND
4,4'-DDD	0.01	ND
Endosulfan II	0.01	ND
4,4'-DDT	0.02	ND
Endrin Aldehyde	1.0	ND
Endosulfan Sulfate	0.5	ND
Methoxychlor	0.5	ND
Toxaphene	0.1	ND
Chlordane	0.1	ND

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COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	EMCON	**Service Request:**	L9605032
Project:	Town & Country/#22152-001.001	**Date Collected:**	12/18/96
Sample Matrix:	Soil	**Date Received:**	12/18/96
		Date Extracted:	12/21/96

Organochlorine Pesticides
EPA Methods 3550/8080
Units: mg/Kg (ppm)

	Sample Name:	**MW-3@3.5-5'**	**EB-7@1'**	**EB-7@3'**
	Lab Code:	L9605032-008	L9605032-009	L9605032-010
	Date Analyzed:	12/23/96	12/23/96	12/23/96
Analyte	**MRL**			
Alpha-BHC	0.01	ND	ND	ND
Gamma-BHC (Lindane)	0.01	ND	ND	ND
Beta-BHC	0.04	ND	ND	ND
Heptachlor	0.01	ND	ND	ND
Delta-BHC	0.01	ND	ND	ND
Aldrin	0.02	ND	ND	ND
Heptachlor Epoxide	0.01	ND	ND	ND
Endosulfan I	0.1	ND	ND	ND
4,4'-DDE	0.01	ND	0.03	0.07
Dieldrin	0.01	ND	ND	ND
Endrin	0.05	ND	ND	ND
4,4'-DDD	0.01	ND	ND	ND
Endosulfan II	0.01	ND	ND	ND
4,4'-DDT	0.02	ND	ND	ND
Endrin Aldehyde	1.0	ND	ND	ND
Endosulfan Sulfate	0.5	ND	ND	ND
Methoxychlor	0.5	ND	ND	ND
Toxaphene	0.1	ND	ND	ND
Chlordane	0.1	ND	ND	ND

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COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	EMCON	**Service Request:**	L9605032
Project:	Town & Country/#22152-001.001	**Date Collected:**	12/18/96
Sample Matrix:	Soil	**Date Received:**	12/18/96
		Date Extracted:	12/21/96

Organochlorine Pesticides
EPA Methods 3550/8080
Units: mg/Kg (ppm)

	Sample Name:	**EB-8@1.5'**	**Method Blank**
	Lab Code:	L9605032-011*	L961221-MB
	Date Analyzed:	12/24/96	12/23/96
Analyte	**MRL**		
Alpha-BHC	0.01	<0.02	ND
Gamma-BHC (Lindane)	0.01	<0.02	ND
Beta-BHC	0.04	<0.08	ND
Heptachlor	0.01	<0.02	ND
Delta-BHC	0.01	<0.02	ND
Aldrin	0.02	<0.04	ND
Heptachlor Epoxide	0.01	<0.02	ND
Endosulfan I	0.1	<0.2	ND
4,4'-DDE	0.01	2.6	ND
Dieldrin	0.01	<0.02	ND
Endrin	0.05	<0.1	ND
4,4'-DDD	0.01	0.29	ND
Endosulfan II	0.01	<0.02	ND
4,4'-DDT	0.02	0.53	ND
Endrin Aldehyde	1.0	<2.0	ND
Endosulfan Sulfate	0.5	<1	ND
Methoxychlor	0.5	<1	ND
Toxaphene	0.1	<0.2	ND
Chlordane	0.1	<0.2	ND

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	EMCON	**Service Request:**	S9602230
Project:	Town & Country/22152-001.001	**Date Collected:**	12/17-18/96
Sample Matrix:	Soil	**Date Received:**	12/18/96
		Date Digested:	12/19/96

Metals
Units: mg/Kg (ppm)

		Sample Name:	**EB-3 @1'**	**EB-3 @3'**	**EB-4 @1'**
		Lab Code:	S9602230-005	S9602230-006	S9602230-007
		Date Analyzed:	12/19/96	12/19/96	12/19/96
Analyte	**EPA Method**	**MRL**			
Arsenic	3050BM/7060	1	73	53	78
Lead	3050BM/6010A	5	10	10	12

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	EMCON	**Service Request:**	S9602230
Project:	Town & Country/22152-001.001	**Date Collected:**	12/17-18/96
Sample Matrix:	Soil	**Date Received:**	12/18/96
		Date Digested:	12/19/96

Metals
Units: mg/Kg (ppm)

		Sample Name:	**EB-4 @3'**	**EB-5 @1'**	**EB-6 @1'**
		Lab Code:	S9602230-008	S9602230-009	S9602230-010
		Date Analyzed:	12/19/96	12/19/96	12/19/96
Analyte	**EPA Method**	**MRL**			
Arsenic	3050BM/7060	1	46	60	78
Lead	3050BM/6010A	5	8	34	11

97-036

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	EMCON	**Service Request:**	S9602230
Project:	Town & Country/22152-001.001	**Date Collected:**	12/17-18/96
Sample Matrix:	Soil	**Date Received:**	12/18/96
		Date Digested:	12/19/96

Metals
Units: mg/Kg (ppm)

		Sample Name:	**EB-6 @3'**	**MW-3 @3.5-5'**	**EB-7 @1'**
		Lab Code:	S9602230-011	S9602230-012	S9602230-014
		Date Analyzed:	12/19/96	12/19/96	12/19/96
Analyte	**EPA Method**	**MRL**			
Arsenic	3050BM/7060	1	34	25	59
Lead	3050BM/6010A	5	9	6	12

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: EMCON
Project: Town & Country/22152-001.001
Sample Matrix: Soil

Service Request: S9602230
Date Collected: 12/17-18/96
Date Received: 12/18/96
Date Digested: 12/19/96

Metals
Units: mg/Kg (ppm)

		Sample Name:	**EB-7 @3'**	**EB-8 @1.5'**	**Method Blank**
		Lab Code:	S9602230-015	S9602230-016	S9602230-SB1
		Date Analyzed:	12/19/96	12/19/96	12/19/96
Analyte	**EPA Method**	**MRL**			
Arsenic	3050BM/7060	1	53	82	ND
Lead	3050BM/6010A	5	11	91	ND

97-036

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	EMCON	**Service Request:**	S9602230
Project:	Town & Country/22152-001.001	**Date Collected:**	12/17-18/96
Sample Matrix:	Soil	**Date Received:**	12/18/96
		Date Extracted:	12/22/96
		Date Analyzed:	12/22/96, 12/24/96

Hydrocarbon Scan
California DHS LUFT Method
Units: mg/Kg (ppm)
As Received Basis

	Analyte:	**Mineral Spirits**	**Jet Fuel**	**Kerosene**	**Diesel**	**Hydraulic Fluid**
	Method Reporting Limit:	1	1	1	1	5
Sample Name	**Lab Code**					
EB-6 @1'	S9602230-010	ND	ND	ND	ND	ND
EB-6 @3'	S9602230-011	ND	ND	ND	ND	ND
Method Blank	9601222-SB1	ND	ND	ND	ND	ND

97-036

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	EMCON	**Service Request:**	S9602230
Project:	Town & Country/22152-001.001	**Date Collected:**	12/17-18/96
Sample Matrix:	Soil	**Date Received:**	12/18/96
		Date Extracted:	12/20/96

BTEX, MTBE and TPH as Gasoline
EPA Methods 5030/8020/California DHS LUFT Method
Units: mg/Kg (ppm)

	Sample Name:	**EB-6 @1'**	**EB-6 @3'**	**Method Blank**
	Lab Code:	S9602230-010	S9602230-011	S961220-SB1
	Date Analyzed:	12/23/96	12/24/96	12/21/96
Analyte	**MRL**			
TPH as Gasoline	1	ND	ND	ND
Benzene	0.005	ND	ND	ND
Toluene	0.005	ND	ND	ND
Ethylbenzene	0.005	ND	ND	ND
Total Xylenes	0.005	ND	ND	ND
Methyl-tert-butyl ether	0.05	ND	ND	ND

APPENDIX A

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	EMCON	**Service Request:**	S9602230
Project:	Town & Country/22152-001.001	**Date Collected:**	12/17-18/96
Sample Matrix:	Soil	**Date Received:**	12/18/96
		Date Extracted:	12/19/96
		Date Analyzed:	NA

Surrogate Recovery Summary
Halogenated Volatile Organic Compounds
EPA Methods 5030/8010

Sample Name	**Lab Code**	**Percent Recovery** 4-Bromofluorobenzene
EB-1 @1'	S9602230-001	98
EB-1 @3'	S9602230-002	91
EB-2 @1'	S9602230-003	98
EB-2 @3'	S9602230-004	94
EB-6 @1'	S9602230-010	96
EB-6 @3'	S9602230-011	94
MW-3 @58-60'	S9602230-013	98
Method Blank		

CAS Acceptance Limits: 74-125

97-036

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: EMCON
Project: Town & Country/#22152-001.001
Sample Matrix: Soil

Service Request: L9605032
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: NA

Surrogate Recovery Summary
Organochlorine Pesticides and Polychlorinated Biphenyls (PCBs)
EPA Methods 3550/8080

Sample Name	**Lab Code**	**Percent Recovery** Tetrachloro-*m* -xylene
EB-3@1'	L9605032-001	70
EB-3@3'	L9605032-002	88
EB-4@1'	L9605032-003	79
EB-4@3'	L9605032-004	82
EB-5@1'	L9605032-005	89
EB-6@1'	L9605032-006	77
EB-6@3'	L9605032-007	64
MW-3@3.5-5'	L9605032-008	68
EB-7@1'	L9605032-009	61
EB-7@3'	L9605032-010	76
EB-8@1.5'	L9605032-011	77
Method Blank	L961221-MB	95

CAS Acceptance Limits: 45-140

97-036

SUR1/120594

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: EMCON
Project: Town & Country/22152-001.001
Sample Matrix: Soil

Service Request: S9602230
Date Collected: 12/17-18/96
Date Received: 12/18/96
Date Extracted: NA
Date Analyzed: 12/22/96, 12/24/96

Surrogate Recovery Summary
Hydrocarbon Scan
California DHS LUFT Method

Sample Name	**Lab Code**	**Percent Recovery** p-Terphenyl
EB-6 @1'	S9602230-010	85
EB-6 @3'	S9602230-011	85
Method Blank	9601222-SB1	81

CAS Acceptance Limits: 41-140

97 - 036

SUR1/062994

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: EMCON
Project: Town & Country/22152-001.001
Sample Matrix: Soil

Service Request: S9602230
Date Collected: 12/17-18/96
Date Received: 12/18/96
Date Extracted: NA
Date Analyzed: NA

Surrogate Recovery Summary
TPH as Gasoline/BTEX
EPA Methods 5030/8020/California DHS LUFT Method

Sample Name	**Lab Code**	**PID Detector Percent Recovery** 4-Bromofluorobenzene	**FID Detector Percent Recovery** α,α,α–Trifluorotoluene
EB-6 @1'	S9602230-010	104	99
EB-6 @3'	S9602230-011	105	99
Method Blank	S961220-SB1	106	101
	CAS Acceptance Limits:	51-137	51-137

97-036

SUR2/060194

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CHAIN OF CUSTODY/LABORATORY ANALYSIS REPORT FORM

SERVICE REQUEST NO. S9602230 P.O.# ______ PAGE 1 OF 2

PROJECT NAME Town & Country #22152-01.01
PROJECT MGR Mark Smolley
COMPANY/ADDRESS Emcon, SJ
PHONE
FAX
SAMPLERS SIGNATURE Pete Ch

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	NUMBER OF CONTAINERS	Base/Neu/Acid Organics GC/MS 625/8270	Volatile Organics GC/MS 624/8240/8260	Halogenated or Aromatic Volatiles 601/8010☒ 602/8020☐ PCE	TPH as Gas/BTEX DHS LUFT / 8020	TPH as Diesel/HBHC DHS LUFT	TRPH - 418.1	Oil and Grease Method	Metals (total or dissolved) List Below Pb + As	pH, Cond, Cl, SO4, F, TDS, TSS Alk (circle)	NH3-N, COD, Total-P, TKN, NO3 / NO2 (circle)	Total Organic Carbon TOC	Total Phenols	Pesticides (8080)	MTBE			REMARKS
PRESERVATIVE						NP	HCl	HCl	HCl	NP	HCl	HCl	HNO3	NP	H2SO4	H2SO4	H2SO4					
EB-1 @ 1'	12/17/96		1	Soil	1			X														
EB-1 @ 3'			2					X														
EB-2 @ 1'			3					X														
EB-2 @ 3'			4					X														
EB-3 @ 1'			5										X					X				
EB-3 @ 3'			6										X					X				
EB-4 @ 1'			7										X					X				
EB-4 @ 3'			8										X					X				
EB-5 @ 1'			9										X					X				
EB-6 @ 1'			10					X	X	X			X					X	X			

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature Pete Ch	Signature	Signature	Signature
Printed Name Pete Christiansen	Printed Name Brian Hogge	Printed Name	Printed Name
Firm Emcon	Firm CAS	Firm	Firm
Date/Time 12/18/96 1537	Date/Time 12/18/96 1537	Date/Time	Date/Time

TURNAROUND REQUIREMENTS
___ 24 hr ___ 48 hr. X 3-5 day
___ Standard (10-15 working days)
___ Provide Verbal Preliminary Results
___ Provide FAX preliminary Results
Requested Report Date ______

REPORT REQUIREMENTS
X I. Routine Report
___ II Report (includes DUP MAS MSD, as required, may be charged as samples)
___ III Data Validation Report (includes All Raw Data)
___ RWQCB (MDLs/PQLs/TRACE#)

RELINQUISHED BY:	RECEIVED BY:
Signature	Signature
Printed Name	Printed Name
Firm	Firm
Date/Time	Date/Time

SPECIAL INSTRUCTIONS/COMMENTS:
Circle which metals are to be analyzed:
Metals: Al As Sb Pb Ba Se Be Tl B Hg Cd Ca Cr Cu Co Fe Mg Mn Mo Ni K Ag Na Sn V Zn

970089

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CHAIN OF CUSTODY/LABORATORY ANALYSIS REPORT FORM

SERVICE REQUEST NO. S9602230 P.O.# ____ PAGE 2 OF 2

PROJECT NAME Town & Country # 22152-01.01
PROJECT MGR. Mark Smalley
COMPANY/ADDRESS
PHONE
FAX
SAMPLERS SIGNATURE Pete Christiansen

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	NUMBER OF CONTAINERS	Base/Neu/Acid Organics GC/MS 625/8270	Volatile Organics GC/MS 624/8240/8260	Halogenated or Aromatic Volatiles 601/8010 ☒ 602/8020 ☐	TPH as Gas/BTEX DHS LUFT / 8020 AcE	TPH as Diesel/HBHC DHS LUFT	TRPH - 418.1	Oil and Grease Method ____	Metals (total or dissolved) List Below Pb, As	pH, Cond, Cl, SO4, F, TDS, TSS Alk (circle)	NH3-N, COD, Total-P, TKN, NO3 / NO2 (circle)	Total Organic Carbon TOC	Total Phenols	Pesticides (8080)	MTBE			REMARKS
					PRESERVATIVE	NP	HCl	HCl	HCl	NP	HCl	HCl	HNO3	NP	H2SO4	H2SO4	H2SO4					
EB-6 @ 3'	12/17/96		11	Soil	1			X	X	X			X					X				
MW-3 @ 3.5-5'	12/18/96		12	↓	↓								X					X				
MW-3 @ 5.5-6'	12/18/96		13					X														
EB-7 @ 1'	↓		14										X					X				
EB-7 @ 3'			15										X					X				
EB-8 @ 1.5'	↓		16	↓	↓								X					X				

RELINQUISHED BY:
Signature Pete Christiansen
Printed Name Pete Christiansen
Firm EMCON
Date/Time 12/18/96 1537

RECEIVED BY:
Signature Brian Hagge
Printed Name Brian Hagge
Firm CAS
Date/Time 12/18/96 1537

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

TURNAROUND REQUIREMENTS
___ 24 hr ___ 48 hr X 3-5 day
___ Standard (10-15 working days)
___ Provide Verbal Preliminary Results
___ Provide FAX preliminary Results
Requested Report Date ____

REPORT REQUIREMENTS
X I Routine Report
___ II Report (includes DUP MAS MSD, as required, may be charged as samples)
___ III Data Validation Report (includes All Raw Data)
___ RWQCB (MDLs/PQLs/TRACE#)

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

SPECIAL INSTRUCTIONS/COMMENTS:
Circle which metals are to be analyzed:
Metals: Al As Sb Pb Ba Se Be Tl B Hg Cd Ca Cr Cu Co Fe Mg Mn Mo Ni K Ag Na Sn V Zn

97-036

28

Columbia
Analytical
Services inc.

December 31, 1996 Service Request No.: S9602259

Mr. Mark Smolley
EMCON
1921 Ringwood Avenue
San Jose, CA 95131

RE: Town & Country/22152-001.001

Dear Mr. Smolley:

The following pages contain analytical results for sample(s) received by the laboratory on December 20, 1996. Results of sample analyses are followed by Appendix A which contains sample custody documentation and quality assurance deliverables requested for this project. The work requested has been assigned the Service Request No. listed above. To help expedite our service, please refer to this number when contacting the laboratory.

Analytical results were produced by procedures consistent with Columbia Analytical Services' (CAS) Quality Assurance Manual (with any deviations noted). Signature of this CAS Analytic Report below confirms that pages 2 through 10, following, have been thoroughly reviewed an approved for release in accord with CAS Standard Operating Procedure ADM-DatRev3.

Please feel welcome to contact me should you have questions or further needs.

Sincerely,

Steven L. Green
Project Chemist

97-036

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COLUMBIA ANALYTICAL SERVICES, Inc.
Acronyms

A2LA	American Association for Laboratory Accreditation
ASTM	American Society for Testing and Materials
BOD	Biochemical Oxygen Demand
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes
CAM	California Assessment Metals
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
COD	Chemical Oxygen Demand
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DLCS	Duplicate Laboratory Control Sample
DMS	Duplicate Matrix Spike
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
IC	Ion Chromatography
ICB	Initial Calibration Blank sample
ICP	Inductively Coupled Plasma atomic emission spectrometry
ICV	Initial Calibration Verification sample
J	Estimated concentration. The value is less than the MRL, but greater than or equal to the MDL. If the value is equal to the MRL, the result is actually <MRL before rounding.
LCS	Laboratory Control Sample
LUFT	Leaking Underground Fuel Tank
M	Modified
MBAS	Methylene Blue Active Substances
MCL	Maximum Contaminant Level. The highest permissible concentration of a substance allowed in drinking water as established by the U. S. EPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
MS	Matrix Spike
MTBE	Methyl tert-Butyl Ether
NA	Not Applicable
NAN	Not Analyzed
NC	Not Calculated
NCASI	National Council of the paper industry for Air and Stream Improvement
ND	Not Detected at or above the method reporting/detection limit (MRL/MDL)
NIOSH	National Institute for Occupational Safety and Health
NTU	Nephelometric Turbidity Units
ppb	Parts Per Billion
ppm	Parts Per Million
PQL	Practical Quantitation Limit
QA/QC	Quality Assurance/Quality Control
RCRA	Resource Conservation and Recovery Act
RPD	Relative Percent Difference
SIM	Selected Ion Monitoring
SM	Standard Methods for the Examination of Water and Wastewater, 18th Ed., 1992
STLC	Solubility Threshold Limit Concentration
SW	Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 3rd Ed., 1986 and as amended by Updates I, II, IIA, and IIB.
TCLP	Toxicity Characteristic Leaching Procedure
TDS	Total Dissolved Solids
TPH	Total Petroleum Hydrocarbons
tr	Trace level. The concentration of an analyte that is less than the PQL but greater than or equal to the MDL. If the value is equal to the PQL, the result is actually <PQL before rounding.
TRPH	Total Recoverable Petroleum Hydrocarbons
TSS	Total Suspended Solids
TTLC	Total Threshold Limit Concentration
VOA	Volatile Organic Analyte(s)

Analytical Report

Client:	EMCON	**Service Request:**	L9605103
Project:	Town & Country/#22152-01.01	**Date Collected:**	12/19/96
Sample Matrix:	Soil	**Date Received:**	12/20/96
		Date Extracted:	12/28/96

Organochlorine Pesticides
EPA Methods 3550/8080
Units: mg/Kg (ppm)

	Sample Name:	**EB-5 @ 3'**	**Method Blank**
	Lab Code:	L9605103-001	L961228-MB
	Date Analyzed:	12/30/96	12/30/96
Analyte	**MRL**		
Alpha-BHC	0.01	ND	ND
Gamma-BHC (Lindane)	0.01	ND	ND
Beta-BHC	0.04	ND	ND
Heptachlor	0.01	ND	ND
Delta-BHC	0.01	ND	ND
Aldrin	0.02	ND	ND
Heptachlor Epoxide	0.01	ND	ND
Endosulfan I	0.1	ND	ND
4,4'-DDE	0.01	1.7	ND
Dieldrin	0.01	ND	ND
Endrin	0.05	ND	ND
4,4'-DDD	0.01	0.10	ND
Endosulfan II	0.01	ND	ND
4,4'-DDT	0.02	ND	ND
Endrin Aldehyde	1.0	ND	ND
Endosulfan Sulfate	0.5	ND	ND
Methoxychlor	0.5	ND	ND
Toxaphene	0.1	ND	ND
Chlordane	0.1	ND	ND

97-036

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	EMCON	**Service Request:**	S9602259
Project:	Town & Country/22152-001.001	**Date Collected:**	12/19-20/96
Sample Matrix:	Soil	**Date Received:**	12/20/96
		Date Extracted:	12/23/96
		Date Analyzed:	12/23-24/96

BTEX and TPH as Gasoline
EPA Methods 5030/8020/California DHS LUFT Method
As Received Basis

	Analyte:	**TPH as Gasoline**	**Benzene**	**Toluene**	**Ethyl-benzene**	**Xylenes, Total**
	Units:	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)
	Method Reporting Limit:	1	0.005	0.005	0.005	0.005
Sample Name	**Lab Code**					
MW-1 @ 19.5'	S9602259-002	ND	ND	ND	ND	ND
MW-1 @ 30'	S9602259-003	ND	ND	ND	ND	ND
Method Blank	S961223-SB1	ND	ND	ND	ND	ND

97-036

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	EMCON	**Service Request:**	S9602259
Project:	Town & Country/22152-001.001	**Date Collected:**	12/19-20/96
Sample Matrix:	Soil	**Date Received:**	12/20/96
		Date Extracted:	12/27/96
		Date Analyzed:	12/27/96

TPH as Diesel
California DHS LUFT Method
Units: mg/Kg (ppm)
As Received Basis

Sample Name	**Lab Code**	**MRL**	**Result**
MW-1 @ 19.5'	S9602259-002	1	ND
MW-1 @ 30'	S9602259-003	1	ND
Method Blank	S9601227-SB1	1	ND

97-036

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	EMCON	**Service Request:**	S9602259
Project:	Town & Country/22152-001.001	**Date Collected:**	12/19-20/96
Sample Matrix:	Soil	**Date Received:**	12/20/96
		Date Digested:	12/21/96

Metals
Units: mg/Kg (ppm)

		Sample Name:	**EB-5 @ 3'**	**Method Blank**
		Lab Code:	S9602259-001	S9602259-MB1
		Date Analyzed:	12/22/96	12/22/96
Analyte	**EPA Method**	**MRL**		
Arsenic	3050BM/6010A	5	860	ND
Lead	3050BM/6010A	5	1500	ND

3S22EPA/120594

97-036

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	EMCON	**Service Request:**	L9605103
Project:	Town & Country/#22152-01.01	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	NA

Surrogate Recovery Summary
Organochlorine Pesticides
EPA Methods 3550/8080

Sample Name	**Lab Code**	**Percent Recovery** Tetrachloro-*m*-xylene
EB-5 @ 3'	L9605103-001	76
Method Blank	L961228-MB	99

CAS Acceptance Limits: 45-140

97-036

SUR1/120594

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: EMCON
Project: Town & Country/22152-001.001
Sample Matrix: Soil

Service Request: S9602259
Date Collected: 12/19-20/96
Date Received: 12/20/96
Date Extracted: NA
Date Analyzed: NA

Surrogate Recovery Summary
TPH as Gasoline/BTEX
EPA Methods 5030/8020/California DHS LUFT Method

Sample Name	Lab Code	**PID Detector Percent Recovery** 4-Bromofluorobenzene	**FID Detector Percent Recovery** α,α,α-Trifluorotoluene
MW-1 @ 19.5'	S9602259-002	109	99
MW-1 @ 30'	S9602259-003	104	97
Method Blank	S961223-SB1	100	91
	CAS Acceptance Limits:	51-137	51-137

97-036

SUR2/060194

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: EMCON
Project: Town & Country/22152-001.001
Sample Matrix: Soil

Service Request: S9602259
Date Collected: 12/19-20/96
Date Received: 12/20/96
Date Extracted: NA
Date Analyzed: 12/27/96

Surrogate Recovery Summary
TPH as Diesel
California DHS LUFT Method

Sample Name	**Lab Code**	**Percent Recovery** p-Terphenyl
MW-1 @ 19.5'	S9602259-002	89
MW-1 @ 30'	S9602259-003	88
Method Blank	S9601227-SB1	86

CAS Acceptance Limits: 41-140

SUR1/062994

97-036

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CHAIN OF CUSTODY/LABORATORY ANALYSIS REPORT FORM

SERVICE REQUEST NO. S9602259 P.O.# ______ PAGE 1 OF 1

PROJECT NAME TOWN & COUNTRY # 22152-01.01
PROJECT MGR. MARK SMOLLEY
COMPANY/ADDRESS EMCON, SJ
PHONE
FAX
SAMPLERS SIGNATURE Pete Christinsen

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	NUMBER OF CONTAINERS	Base/Neu/Acid Organics GC/MS 625/8270	Volatile Organics GC/MS 624/8240/8260	Halogenated or Aromatic Volatiles 601/8010 ☐ 602/8020 ☐	TPH as (Gas/BTEX) DHS LUFT / 8020	TPH as (Diesel)/HBHC DHS LUFT	TRPH - 418.1	Oil and Grease Method ___	(Metals) (total or dissolved) List Below As + Pb	pH, Cond, Cl, SO₄, F, TDS, TSS Alk (circle)	NH3-N, COD, Total-P, TKN, NO3 / NO2 (circle)	Total Organic Carbon TOC	Total Phenols	Chlorinated Pesticides				REMARKS
PRESERVATIVE						NP	HCl	HCl	HCl	NP	HCl	HCl	HNO3	NP	H2SO4	H2SO4	H2SO4					
EB-S @ 3'	12/19/96		1	SOIL	1								X					X				
MW-1 @ 19.5'	12/20/96		2	↓	1				X	X												
MW-1 @ 30'	12/20/96		3		1				X	X												
MW-1 @ 6.5'	↓		4		1																	
MW-1 @ 10'			5		1																	HOLD ↓
MW-1 @ 15'			6		1																	
MW-1 @ 24.5			7		1																	
MW-1 @ 34.5	↓		8	↓	1																	↓
~~MW-1~~ rc			~~9~~																			

RELINQUISHED BY:
Signature Pete Christinsen
Printed Name Pete Christinsen
Firm EMCON
Date/Time 12/2-/96 1545

RECEIVED BY:
Signature Joanne Brown
Printed Name Joanne Brown
Firm CAS
Date/Time 12/20/96 1545

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

TURNAROUND REQUIREMENTS
___ 24 hr ___ 48 hr. X [✓ 5 day]
___ Standard (10-15 working days)
___ Provide Verbal Preliminary Results
___ Provide FAX preliminary Results
Requested Report Date ______

REPORT REQUIREMENTS
X I. Routine Report
___ II Report (includes DUP MAS MSD, as required, may be charged as samples)
___ III Data Validation Report (includes All Raw Data)
___ RWQCB (MDLs/PQLs/TRACE#)

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

SPECIAL INSTRUCTIONS/COMMENTS:
Circle which metals are to be analyzed:
Metals: Al Sb Ba Be B Cd Ca Cr Cu Co Fe Mg Mn Mo Ni K Ag Na Sn V Zn [✓ As] [✓ Pb] Se Tl Hg

G/BTEX TPH-D
R8,
metals Hold
R20/S29

DISTRIBUTION: WHITE - return to originator; YELLOW - lab; PINK - retained by originator

400 5

97-036

Columbia
Analytical
Services inc.

January 10, 1997

Service Request No.: S9700021

Mr. Mark Smolley
EMCON
1921 Ringwood Avenue
San Jose, CA 95131

RE: **Town & Country/22152-001.001**

Dear Mr. Smolley:

The following pages contain analytical results for sample(s) received by the laboratory on December 18, 1996. Results of sample analyses are followed by Appendix A which contains sample custody documentation and quality assurance deliverables requested for this project. The work requested has been assigned the Service Request No. listed above. To help expedite our service, please refer to this number when contacting the laboratory.

Analytical results were produced by procedures consistent with Columbia Analytical Services' (CAS) Quality Assurance Manual (with any deviations noted). Signature of this CAS Analytic Report below confirms that pages 2 through 8, following, have been thoroughly reviewed and approved for release in accord with CAS Standard Operating Procedure ADM-DatRev3.

Please feel welcome to contact me should you have questions or further needs.

Sincerely,

Steven L. Green
Project Chemist

97-036

COLUMBIA ANALYTICAL SERVICES, Inc.

Acronyms

A2LA	American Association for Laboratory Accreditation
ASTM	American Society for Testing and Materials
BOD	Biochemical Oxygen Demand
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes
CAM	California Assessment Metals
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
COD	Chemical Oxygen Demand
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DLCS	Duplicate Laboratory Control Sample
DMS	Duplicate Matrix Spike
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
IC	Ion Chromatography
ICB	Initial Calibration Blank sample
ICP	Inductively Coupled Plasma atomic emission spectrometry
ICV	Initial Calibration Verification sample
J	Estimated concentration. The value is less than the MRL, but greater than or equal to the MDL. If the value is equal to the MRL, the result is actually <MRL before rounding.
LCS	Laboratory Control Sample
LUFT	Leaking Underground Fuel Tank
M	Modified
MBAS	Methylene Blue Active Substances
MCL	Maximum Contaminant Level. The highest permissible concentration of a substance allowed in drinking water as established by the U. S. EPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
MS	Matrix Spike
MTBE	Methyl tert-Butyl Ether
NA	Not Applicable
NAN	Not Analyzed
NC	Not Calculated
NCASI	National Council of the paper industry for Air and Stream Improvement
ND	Not Detected at or above the method reporting/detection limit (MRL/MDL)
NIOSH	National Institute for Occupational Safety and Health
NTU	Nephelometric Turbidity Units
ppb	Parts Per Billion
ppm	Parts Per Million
PQL	Practical Quantitation Limit
QA/QC	Quality Assurance/Quality Control
RCRA	Resource Conservation and Recovery Act
RPD	Relative Percent Difference
SIM	Selected Ion Monitoring
SM	Standard Methods for the Examination of Water and Wastewater, 18th Ed., 1992
STLC	Solubility Threshold Limit Concentration
SW	Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 3rd Ed., 1986 and as amended by Updates I, II, IIA, and IIB.
TCLP	Toxicity Characteristic Leaching Procedure
TDS	Total Dissolved Solids
TPH	Total Petroleum Hydrocarbons
tr	Trace level. The concentration of an analyte that is less than the PQL but greater than or equal to the MDL. If the value is equal to the PQL, the result is actually <PQL before rounding.
TRPH	Total Recoverable Petroleum Hydrocarbons
TSS	Total Suspended Solids
TTLC	Total Threshold Limit Concentration
VOA	Volatile Organic Analyte(s)

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	EMCON	**Service Request:**	S9700021
Project:	Town & Country/22152-001.001	**Date Collected:**	12/17-19/96
Sample Matrix:	Soil	**Date Received:**	12/18-19/96
		Date Digested:	1/9/97

Metals
Units: mg/L (ppm) in WET Extract
Soluble Threshold Limit Concentration (STLC)

			Sample Name:	**EB-3 @1'**	**EB-3 @3'**	**EB-4 @1'**
			Lab Code:	S9700021-001	S9700021-002	S9700021-003
			Date Analyzed:	1/9/97	1/9/97	1/9/97
Analyte	**EPA Method**	**STLC Limits***	**MRL**			
Arsenic	3005/6010A	5.0	0.5	ND	ND	ND

* State of California Code of Regulations, Title 22, Division 4.5, Chapter 11, Article 3, Section 66261.24 and Article 5, Section 66261.126, Appendix II.

3S22EPA/120594

97-036

Analytical Report

Client:	EMCON	**Service Request:**	S9700021
Project:	Town & Country/22152-001.001	**Date Collected:**	12/17-19/96
Sample Matrix:	Soil	**Date Received:**	12/18-19/96
		Date Digested:	1/9/97

Metals
Units: mg/L (ppm) in WET Extract
Soluble Threshold Limit Concentration (STLC)

			Sample Name:	**EB-5 @1'**	**EB-6 @1'**	**EB-7 @1'**
			Lab Code:	S9700021-004	S9700021-005	S9700021-006
			Date Analyzed:	1/9/97	1/9/97	1/9/97
Analyte	**EPA Method**	**STLC Limits***	**MRL**			
Arsenic	3005/6010A	5.0	0.5	ND	ND	ND

* State of California Code of Regulations, Title 22, Division 4.5, Chapter 11, Article 3, Section 66261.24 and Article 5, Section 66261.126, Appendix II.

97-036

Analytical Report

Client. EMCON
Project: Town & Country/22152-001.001
Sample Matrix: Soil

Service Request: S9700021
Date Collected: 12/17-19/96
Date Received: 12/18-19/96
Date Digested: 1/9/97

Metals
Units: mg/L (ppm) in WET Extract
Soluble Threshold Limit Concentration (STLC)

			Sample Name:	**EB-7 @3'**	**EB-8 @1.5'**	**EB-8 @3.5'**
			Lab Code:	S9700021-007	S9700021-008	S9700021-009
			Date Analyzed:	1/9/97	1/9/97	1/9/97
Analyte	**EPA Method**	**STLC Limits***	**MRL**			
Arsenic	3005/6010A	5.0	0.5	ND	ND	ND
Lead	3005/6010A	5.0	C.5	--	2.4	2.2

* State of California Code of Regulations, Title 22, Division 4.5, Chapter 11, Article 3, Section 66261.24 and Article 5, Section 66261.126, Appendix II.

97 - 036

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	EMCON		**Service Request:**	S9700021
Project:	Town & Country/22152-001.001		**Date Collected:**	12/17-19/96
Sample Matrix:	Soil		**Date Received:**	12/18-19/96
			Date Digested:	1/9/97

Metals
Units: mg/L (ppm) in WET Extract
Soluble Threshold Limit Concentration (STLC)

			Sample Name:	**EB-9 @1.5'**	**EW-9 @3.5'**	**MW-2 @1'**
			Lab Code:	S9700021-010	S9700021-011	S9700021-012
			Date Analyzed.	1/9/97	1/9/97	1/9/97
Analyte	**EPA Method**	**STLC Limits***	**MRL**			
Arsenic	3005/6010A	5.0	0.5	<2C	ND	ND
Lead	3005/6010A	5.0	0.5	5.5	0.5	ND

* State of California Code of Regulations, Title 22, Division 4.5, Chapter 11, Article 3, Section 66261.24 and Article 5, Section 66261.126, Appendix II.

C MRL is elevated because of matrix interferences and because of sample required diluting.

97-036

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: EMCON
Project: Town & Country/22152-001.001
Sample Matrix: Soil

Service Request: S9700021
Date Collected: 12/17-19/96
Date Received: 12/18-19/96
Date Digested: 1/9/97

Metals
Units: mg/L (ppm) in WET Extract
Soluble Threshold Limit Concentration (STLC)

			Sample Name:	**MW-2 @3'**	**Method Blank**
			Lab Code:	S9700021-013	S960021-WB1
			Date Analyzed:	1/9/97	1/9/97
Analyte	**EPA Method**	**STLC Limits***	**MRL**		
Arsenic	3005/6010A	5.0	0.5	ND	ND
Lead	3005/6010A	5.0	0.5	ND	ND

* State of California Code of Regulations, Title 22, Division 4.5, Chapter 11, Article 3, Section 66261.24 and Article 5, Section 66261.126, Appendix II.

Columbia Analytical Services™
2059 Junction Avenue • San Jose, CA 95131 • (408) 437-2400 • FAX (408) 437-9356

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

SERVICE REQUEST NO. S970021 P.O.# ____ PAGE 1 OF 2

PROJECT NAME Tanit Country # 22152-001.001
PROJECT MGR. Mark Smalley
COMPANY EMCON SJ
ADDRESS ____
____ PHONE ____
FAX ____
SAMPLER'S SIGNATURE ____

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	NUMBER OF CONTAINERS	Base/Neu/Acid Organics GC/MS 625/8270	Volatile Organics GC/MS 624/8240/8260	Halogenated or Aromatic Volatiles 601/8010 602/8020	TPH as Gas/BTEX DHS LUFT / 8020	TPH as Diesel/HBHC DHS LUFT	TRPH - 418.1 Oil and Grease Method	Metals (total or dissolved) List Below	pH, Cond, Cl, SO4, F, TDS, TSS Alk, NO3, NO2 (circle)	NH3-N, COD, Total-P, TKN, NO3 / NO2 (circle)	Total Organic Carbon TOC	Total Phenols Method ____	Cyanide	STLC As	~~STLA~~ STLC As, Pb	M 1/6/97		REMARKS
PRESERVATIVE						NP	HCl	HCl	HCl	NP	HCl	HNO3	NP	H2SO4	H2SO4	H2SO4	NaOH					
EB-3@1'	12/17/96		1	Soil	1													X				S9602230-005
EB-3@3'			2		1													X				6
EB-4@1'			3		1													X				7
EB-5@1'			4		1													X				9
EB-6@1'			5		1													X				10
EB-7@1'	12/18/96		6		1													X				14
EB-7@3'			7		1													X				15
EB-8@1.5'			8		1														X			16
EB-8@3.5'	12/18/96		9		1														X			S9602247-001
EB-9@1.5'	12/19/96		10		1														X			S9602247-002

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature	Signature	Signature	Signature
Printed Name	Printed Name	Printed Name	Printed Name
Firm	Firm	Firm	Firm
Date/Time	Date/Time	Date/Time	Date/Time

TURNAROUND REQUIREMENTS
___ 1 day ___ 2 day ___ 3 day
___ 5 day ___ Other
X Standard (10 working days)
___ Provide Preliminary Results
Date Due 1/10/97
(4 days)

REPORT REQUIREMENTS
X I. Routine Report
___ II. Report (includes DUP MAS MSD, as required, may be charged as samples)
___ III. Data Validation Report (includes All Raw Data)
___ RWQCB (MDLs/PQLs/TRACE#)

RELINQUISHED BY:	RECEIVED BY:
Signature	Signature
Printed Name	Printed Name
Firm	Firm
Date/Time	Date/Time

SPECIAL INSTRUCTIONS/COMMENTS:
Circle which metals are to be analyzed:
Metals: Al Sb Ba Be B Cd Ca Cr Co Cu Fe Mg Mn Mo Ni K Ag Na Sn V Zn
As Pb Se Tl Hg

Samples originally received 12/18/96 and 12/19/96 under SR#s S9602230 and S9602247.
Additional analyses requested 1/6/97 by Mark Smalley.

DISTRIBUTION WHITE - return to originator; YELLOW - lab; PINK - retained by originator

400 5

97-036

Analytical Services™
2059 Junction Avenue • San Jose, CA 95131 • (408) 437-2400 • FAX (408) 437-9356

CHAIN OF CUSTODY/LABORATORY ANALYSIS REPORT FORM

SERVICE REQUEST NO. S970021 P.O.# ____ PAGE 2 OF 2

PROJECT NAME Town+Country #22152001001
PROJECT MGR. Mark Smolley
COMPANY EMCON - SJ
ADDRESS ____
PHONE ____
FAX ____
SAMPLER'S SIGNATURE ____

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	NUMBER OF CONTAINERS	Base/Neu/Acid Organics GC/MS 625/8270	Volatile Organics GC/MS 624/8240/8260	Halogenated or Aromatic Volatiles 601/8010 ⌐ 602/8020 ⌐	TPH as Gas/BTEX DHS LUFT / 8020	TPH as Diesel/HBHC DHS LUFT	TRPH - 418.1 Oil and Grease Method ____	Metals (total or dissolved) List Below	pH, Cond, Cl, SO4, F, TDS, TSS Alk, NO3, NO2 (circle)	NH3-N, COD, Total-P, TKN, NO3 / NO2 (circle)	Total Organic Carbon TOC	Total Phenols Method ____	Cyanide	~~STLC As~~ STLC As	STLC As, Pb			REMARKS
PRESERVATIVE						NP	HCl	HCl	HCl	NP	HCl	HNO3	NP	H2SO4	H2SO4	H2SO4	NaOH					
EW-9 @ 3.5'	12/19/96		11	Soil	1													X				S9602247-003
MW-2 @ 1'	↓		12	↓	1														X			↓ 6
MW-2 @ 3'	↓		13	↓	1														X			7

RELINQUISHED BY:
Signature ____
Printed Name ____
Firm ____
Date/Time ____

RECEIVED BY:
Signature ____
Printed Name ____
Firm ____
Date/Time ____

RELINQUISHED BY:
Signature ____
Printed Name ____
Firm ____
Date/Time ____

RECEIVED BY:
Signature ____
Printed Name ____
Firm ____
Date/Time ____

TURNAROUND REQUIREMENTS
___ 1 day ___ 2 day ___ 3 day
___ 5 day ___ Other
___ Standard (10 working days)
___ Provide Preliminary Results
Date Due 1/10/97
(4 days)

REPORT REQUIREMENTS
[✓ I Routine Report]
___ II Report (includes DUP MAS MSD, as required, may be charged as samples)
___ III Data Validation Report (includes All Raw Data)
___ RWQCB (MDLs/PQLs/TRACE#)

RELINQUISHED BY:
Signature ____
Printed Name ____
Firm ____
Date/Time ____

RECEIVED BY:
Signature ____
Printed Name ____
Firm ____
Date/Time ____

SPECIAL INSTRUCTIONS/COMMENTS:

Circle which metals are to be analyzed:

Metals: Al Sb Ba Be B Cd Ca Cr Co Cu Fe Mg Mn Mo Ni K Ag Na Sn V Zn
As Pb Se Tl Hg

DISTRIBUTION: WHITE - return to originator, YELLOW - lab; PINK - retained by originator

400 5

97-036

Columbia Analytical Services inc.

January 10, 1997

Service Request No.: S9700021

Mr. Mark Smolley
EMCON
1921 Ringwood Avenue
San Jose, CA 95131

RE: **Town & Country/22152-001.001**

Dear Mr. Smolley:

The following pages contain analytical results for sample(s) received by the laboratory on December 18, 1996. Results of sample analyses are followed by Appendix A which contains sample custody documentation and quality assurance deliverables requested for this project. The work requested has been assigned the Service Request No. listed above. To help expedite our service, please refer to this number when contacting the laboratory.

Analytical results were produced by procedures consistent with Columbia Analytical Services' (CAS) Quality Assurance Manual (with any deviations noted). Signature of this CAS Analytic Report below confirms that pages 2 through 8, following, have been thoroughly reviewed and approved for release in accord with CAS Standard Operating Procedure ADM-DatRev3.

Please feel welcome to contact me should you have questions or further needs.

Sincerely,

Steven L. Green
Project Chemist

97-036

COLUMBIA ANALYTICAL SERVICES, Inc.

Acronyms

A2LA	American Association for Laboratory Accreditation
ASTM	American Society for Testing and Materials
BOD	Biochemical Oxygen Demand
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes
CAM	California Assessment Metals
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
COD	Chemical Oxygen Demand
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DLCS	Duplicate Laboratory Control Sample
DMS	Duplicate Matrix Spike
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
IC	Ion Chromatography
ICB	Initial Calibration Blank sample
ICP	Inductively Coupled Plasma atomic emission spectrometry
ICV	Initial Calibration Verification sample
J	Estimated concentration. The value is less than the MRL, but greater than or equal to the MDL. If the value is equal to the MRL, the result is actually <MRL before rounding.
LCS	Laboratory Control Sample
LUFT	Leaking Underground Fuel Tank
M	Modified
MBAS	Methylene Blue Active Substances
MCL	Maximum Contaminant Level. The highest permissible concentration of a substance allowed in drinking water as established by the U. S. EPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
MS	Matrix Spike
MTBE	Methyl tert-Butyl Ether
NA	Not Applicable
NAN	Not Analyzed
NC	Not Calculated
NCASI	National Council of the paper industry for Air and Stream Improvement
ND	Not Detected at or above the method reporting/detection limit (MRL/MDL)
NIOSH	National Institute for Occupational Safety and Health
NTU	Nephelometric Turbidity Units
ppb	Parts Per Billion
ppm	Parts Per Million
PQL	Practical Quantitation Limit
QA/QC	Quality Assurance/Quality Control
RCRA	Resource Conservation and Recovery Act
RPD	Relative Percent Difference
SIM	Selected Ion Monitoring
SM	Standard Methods for the Examination of Water and Wastewater, 18th Ed., 1992
STLC	Solubility Threshold Limit Concentration
SW	Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 3rd Ed., 1986 and as amended by Updates I, II, IIA, and IIB.
TCLP	Toxicity Characteristic Leaching Procedure
TDS	Total Dissolved Solids
TPH	Total Petroleum Hydrocarbons
tr	Trace level. The concentration of an analyte that is less than the PQL but greater than or equal to the MDL. If the value is equal to the PQL, the result is actually <PQL before rounding.
TRPH	Total Recoverable Petroleum Hydrocarbons
TSS	Total Suspended Solids
TTLC	Total Threshold Limit Concentration
VOA	Volatile Organic Analyte(s)

97-036

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	EMCON	**Service Request:**	S9700021
Project:	Town & Country/22152-001.001	**Date Collected:**	12/17-19/96
Sample Matrix:	Soil	**Date Received:**	12/18-19/96
		Date Digested:	1/9/97

Metals
Units: mg/L (ppm) in WET Extract
Soluble Threshold Limit Concentration (STLC)

			Sample Name:	**EB-3 @1'**	**EB-3 @3'**	**EB-4 @1'**
			Lab Code:	S9700021-001	S9700021-002	S9700021-003
			Date Analyzed:	1/9/97	1/9/97	1/9/97
Analyte	**EPA Method**	**STLC Limits***	**MRL**			
Arsenic	3005/6010A	5.0	0.5	ND	ND	ND

* State of California Code of Regulations, Title 22, Division 4.5, Chapter 11, Article 3, Section 66261.24 and Article 5, Section 66261.126, Appendix II.

97 - 036

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	EMCON	**Service Request:**	S9700021
Project:	Town & Country/22152-001.001	**Date Collected:**	12/17-19/96
Sample Matrix:	Soil	**Date Received:**	12/18-19/96
		Date Digested:	1/9/97

Metals
Units: mg/L (ppm) in WET Extract
Soluble Threshold Limit Concentration (STLC)

			Sample Name:	**EB-5 @1'**	**EB-6 @1'**	**EB-7 @1'**
			Lab Code:	S9700021-004	S9700021-005	S9700021-006
			Date Analyzed:	1/9/97	1/9/97	1/9/97
Analyte	**EPA Method**	**STLC Limits***	**MRL**			
Arsenic	3005/6010A	5.0	0.5	ND	ND	ND

* State of California Code of Regulations, Title 22, Division 4.5, Chapter 11, Article 3, Section 66261.24 and Article 5, Section 66261.126, Appendix II.

3S22EPA/120594

97 - 036

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: EMCON
Project: Town & Country/22152-001.001
Sample Matrix: Soil

Service Request: S9700021
Date Collected: 12/17-19/96
Date Received: 12/18-19/96
Date Digested: 1/9/97

Metals
Units: mg/L (ppm) in WET Extract
Soluble Threshold Limit Concentration (STLC)

			Sample Name:	**EB-7 @3'**	**EB-8 @1.5'**	**EB-8 @3.5'**
			Lab Code:	S9700021-007	S9700021-008	S9700021-009
			Date Analyzed:	1/9/97	1/9/97	1/9/97
Analyte	**EPA Method**	**STLC Limits***	**MRL**			
Arsenic	3005/6010A	5.0	0.5	ND	ND	ND
Lead	3005/6010A	5.0	0.5	--	2.4	2.2

* State of California Code of Regulations, Title 22, Division 4.5, Chapter 11, Article 3, Section 66261.24 and Article 5, Section 66261.126, Appendix II.

3S72EPA/120594

97 - 036

Analytical Report

Client: EMCON
Project: Town & Country/22152-001.001
Sample Matrix: Soil

Service Request: S9700021
Date Collected: 12/17-19/96
Date Received: 12/18-19/96
Date Digested: 1/9/97

Metals
Units: mg/L (ppm) in WET Extract
Soluble Threshold Limit Concentration (STLC)

			Sample Name:	**EB-9 @1.5'**	**EW-9 @3.5'**	**MW-2 @1'**
			Lab Code:	S9700021-010	S9700021-011	S9700021-012
			Date Analyzed:	1/9/97	1/9/97	1/9/97
Analyte	**EPA Method**	**STLC Limits***	**MRL**			
Arsenic	3005/6010A	5.0	0.5	<2C	ND	ND
Lead	3005/6010A	5.0	0.5	5.5	0.5	ND

* State of California Code of Regulations, Title 22, Division 4.5, Chapter 11, Article 3, Section 66261.24 and Article 5, Section 66261.126, Appendix II.

C MRL is elevated because of matrix interferences and because of sample required diluting.

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	EMCON	**Service Request:**	S9700021
Project:	Town & Country/22152-001.001	**Date Collected:**	12/17-19/96
Sample Matrix:	Soil	**Date Received:**	12/18-19/96
		Date Digested:	1/9/97

Metals
Units: mg/L (ppm) in WET Extract
Soluble Threshold Limit Concentration (STLC)

			Sample Name:	**MW-2 @3'**	**Method Blank**
			Lab Code:	S9700021-013	S960021-WB1
			Date Analyzed:	1/9/97	1/9/97
Analyte	**EPA Method**	**STLC Limits***	**MRL**		
Arsenic	3005/6010A	5.0	0.5	ND	ND
Lead	3005/6010A	5.0	0.5	ND	ND

* State of California Code of Regulations, Title 22, Division 4.5, Chapter 11, Article 3, Section 66261.24 and Article 5, Section 66261.126, Appendix II.

3S22EPA/120594

97 - 036

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CHAIN OF CUSTODY/LABORATORY ANALYSIS REPORT FORM

SERVICE REQUEST NO S9700021 P.O # ______ PAGE 1 OF 2

PROJECT NAME Tarrant Country # 22152-001.001
PROJECT MGR. Mark Smolley
COMPANY EMCON SD
ADDRESS ______
PHONE ______
FAX ______
SAMPLER'S SIGNATURE ______

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	NUMBER OF CONTAINERS	Base/Neu/Acid Organics GC/MS 625/8270	Volatile Organics GC/MS 624/8240/8260	Halogenated or Aromatic Volatiles 601/8010 602/8020	TPH as Gas/BTEX DHS LUFT / 8020	TPH as Diesel/HBHC DHS LUFT	TRPH - 418.1 Oil and Grease Method	Metals (total or dissolved) List Below	pH, Cond, Cl, SO4, F, TDS, TSS Alk, NO3, NO2 (circle)	NH3-N, COD, Total-P, TKN, NO3 / NO2 (circle)	Total Organic Carbon TOC	Total Phenols Method	Cyanide	STLC As	~~STEA~~ STLC As, Pb	M 1/6/97		REMARKS
				PRESERVATIVE		NP	HCl	HCl	HCl	NP	HCl	HNO3	NP	H2SO4	H2SO4	H2SO4	NaOH					
EB-3@1'	12/17/96		1	Soil	1													X				S9602230-005
EB-3@3'			2		1													X				6
EB-4@1'			3		1													X				7
EB-5@1'			4		1													X				9
EB-6@1'			5		1													X				10
EB-7@1'	12/18/96		6		1													X				14
EB-7@3'			7		1													X				15
EB-8@1.5'			8		1														X			16
EB-8@3.5'	12/18/96		9		1														X			S9602247-001
EB-9@1.5'	12/19/96		10		1														X			S9602247-002

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature	Signature	Signature	Signature M 1/6
Printed Name	Printed Name	Printed Name	Printed Name
Firm	Firm	Firm	Firm
Date/Time	Date/Time	Date/Time	Date/Time

TURNAROUND REQUIREMENTS
___ 1 day ___ 2 day ___ 3 day
~~X~~ 5 day ___ Other M 1/6
X Standard (10 working days)
___ Provide Preliminary Results
Date Due 1/10/97 (4 days)

REPORT REQUIREMENTS
X I. Routine Report
___ II. Report (includes DUP MAS MSD, as required, may be charged as samples)
___ III. Data Validation Report (includes All Raw Data)
___ RWQCB (MDLs/PQLs/TRACE#)

RELINQUISHED BY:	RECEIVED BY:
Signature	Signature
Printed Name	Printed Name
Firm	Firm
Date/Time	Date/Time

SPECIAL INSTRUCTIONS/COMMENTS:
Circle which metals are to be analyzed:
Metals: Al Sb Ba Be B Cd Ca Cr Co Cu Fe Mg Mn Mo Ni K Ag Na Sn V Zn As Pb Se Tl Hg

Samples originally received 12/18/96 and 12/19/96 under SR#s S9602230 and S9602247.
Additional analyses requested 1/6/97 by Mark Smolley.

DISTRIBUTION: WHITE - return to originator; YELLOW - lab; PINK - retained by originator

400-5

97-036

Analytical Services™
2059 Junction Avenue • San Jose, CA 95131 • (408) 437-2400 • FAX (408) 437-9356

SERVICE REQUEST NO. S970002 1 P.O.# ______ PAGE 2 OF 2

PROJECT NAME Town+Country # 22152-001.001
PROJECT MGR. Mark Smolley
COMPANY EMCON - SJ
ADDRESS ______
______ PHONE ______
FAX ______
SAMPLER'S SIGNATURE ______

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	NUMBER OF CONTAINERS	Base/Neu/Acid Organics GC/MS 625/8270	Volatile Organics GC/MS 624/8240/8260	Halogenated or Aromatic Volatiles 601/8010 ☐ 602/8020 ☐	TPH as Gas/BTEX DHS LUFT / 8020	TPH as Diesel/HBHC DHS LUFT	TRPH - 418.1 Oil and Grease Method	Metals (total or dissolved) List Below	pH, Cond, Cl, SO4, F, TDS, TSS Alk, NO3, NO2 (circle)	NH3-N, COD, Total-P, TKN, NO3 / NO2 (circle)	Total Organic Carbon TOC	Total Phenols Method ____	Cyanide	~~STLC As~~ STLC As	STLC As, Pb			REMARKS
					PRESERVATIVE	NP	HCl	HCl	HCl	NP	HCl	HNO3	NP	H2SO4	H2SO4	H2SO4	NaOH					
EW-9@3.5'	12/19/96		11	Soil	1													X				S9602247-003
MW-2@1'	↓		12	↓	1														X			↓ 6
MW-2@3'	↓		13	↓	1														X			↓ 7

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature	Signature	Signature	Signature
Printed Name	Printed Name	Printed Name	Printed Name
Firm	Firm	Firm	Firm
Date/Time	Date/Time	Date/Time	Date/Time

TURNAROUND REQUIREMENTS
___ 1 day ___ 2 day ___ 3 day
___ 5 day ___ Other
___ Standard (10 working days)
___ Provide Preliminary Results
Date Due 1/10/97
(4 days)

REPORT REQUIREMENTS
☒ I. Routine Report
___ II. Report (includes DUP MAS MSD, as required, may be charged as samples)
___ III. Data Validation Report (includes All Raw Data)
___ RWQCB (MDLs/PQLs/TRACE#)

RELINQUISHED BY:	RECEIVED BY:
Signature	Signature
Printed Name	Printed Name
Firm	Firm
Date/Time	Date/Time

SPECIAL INSTRUCTIONS/COMMENTS:
Circle which metals are to be analyzed:
Metals: Al Sb Ba Be B Cd Ca Cr Co Cu Fe Mg Mn Mo Ni K Ag Na Sn V Zn
As Pb Se Tl Hg

DISTRIBUTION: WHITE - return to originator; YELLOW - lab; PINK - retained by originator

400 5

97 - 038

APPENDIX E

LABORATORY REPORTS AND CHAIN-OF-CUSTODY DOCUMENTATION FOR GROUNDWATER SAMPLES

Columbia
Analytical
Services inc.

January 3, 1997

Service Request No.: S9602302

Mr. Mark Smolley
EMCON
1921 Ringwood Avenue
San Jose, CA 95131

RE: Federal Realty Investment Trust/22152-001 001

Dear Mr. Smolley:

The following pages contain analytical results for sample(s) received by the laboratory on December 31, 1996. Results of sample analyses are followed by Appendix A which contains sample custody documentation and quality assurance deliverables requested for this project. The work requested has been assigned the Service Request No. listed above. To help expedite our service, please refer to this number when contacting the laboratory.

Analytical results were produced by procedures consistent with Columbia Analytical Services' (CAS) Quality Assurance Manual (with any deviations noted). Signature of this CAS Analytic Report below confirms that pages 2 through 11, following, have been thoroughly reviewed an approved for release in accord with CAS Standard Operating Procedure ADM-DatRev3.

Please feel welcome to contact me should you have questions or further needs.

Sincerely,

Steven L. Green
Project Chemist

97-036

59 Junction Avenue ▪ San Jose, California 95131 ▪ Telephone 408/428-1280 ▪ Fax 408/437-9356

COLUMBIA ANALYTICAL SERVICES, Inc.
Acronyms

A2LA	American Association for Laboratory Accreditation
ASTM	American Society for Testing and Materials
BOD	Biochemical Oxygen Demand
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes
CAM	California Assessment Metals
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
COD	Chemical Oxygen Demand
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DLCS	Duplicate Laboratory Control Sample
DMS	Duplicate Matrix Spike
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
IC	Ion Chromatography
ICB	Initial Calibration Blank sample
ICP	Inductively Coupled Plasma atomic emission spectrometry
ICV	Initial Calibration Verification sample
J	Estimated concentration. The value is less than the MRL, but greater than or equal to the MDL. If the value is equal to the MRL, the result is actually <MRL before rounding.
LCS	Laboratory Control Sample
LUFT	Leaking Underground Fuel Tank
M	Modified
MBAS	Methylene Blue Active Substances
MCL	Maximum Contaminant Level. The highest permissible concentration of a substance allowed in drinking water as established by the U. S. EPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
MS	Matrix Spike
MTBE	Methyl tert-Butyl Ether
NA	Not Applicable
NAN	Not Analyzed
NC	Not Calculated
NCASI	National Council of the paper industry for Air and Stream Improvement
ND	Not Detected at or above the method reporting/detection limit (MRL/MDL)
NIOSH	National Institute for Occupational Safety and Health
NTU	Nephelometric Turbidity Units
ppb	Parts Per Billion
ppm	Parts Per Million
PQL	Practical Quantitation Limit
QA/QC	Quality Assurance/Quality Control
RCRA	Resource Conservation and Recovery Act
RPD	Relative Percent Difference
SIM	Selected Ion Monitoring
SM	Standard Methods for the Examination of Water and Wastewater, 18th Ed., 1992
STLC	Solubility Threshold Limit Concentration
SW	Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 3rd Ed., 1986 and as amended by Updates I, II, IIA, and IIB.
TCLP	Toxicity Characteristic Leaching Procedure
TDS	Total Dissolved Solids
TPH	Total Petroleum Hydrocarbons
tr	Trace level. The concentration of an analyte that is less than the PQL but greater than or equal to the MDL. If the value is equal to the PQL, the result is actually <PQL before rounding.
TRPH	Total Recoverable Petroleum Hydrocarbons
TSS	Total Suspended Solids
TTLC	Total Threshold Limit Concentration
VOA	Volatile Organic Analyte(s)

97-036

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	EMCON	**Service Request:**	S9602302
Project:	Federal Realty Investment Trust/22152-001.001	**Date Collected:**	12/31/96
Sample Matrix:	Water	**Date Received:**	12/31/96
		Date Extracted:	NA

Halogenated Volatile Organic Compounds
EPA Methods 8010
Units: ug/L (ppb)

		Sample Name:	**MW-1**	**Method Blank**
		Lab Code:	S9602302-001	S961231-WB1
		Date Analyzed:	12/31/96	12/31/96
Analyte	**MRL**			
Dichlorodifluoromethane (CFC 12)	1		ND	ND
Chloromethane	1		ND	ND
Vinyl Chloride	0.5		ND	ND
Bromomethane	0.5		ND	ND
Chloroethane	0.5		ND	ND
Trichlorofluoromethane (CFC 11)	0.5		ND	ND
1,1-Dichloroethene	0.5		ND	ND
Trichlorotrifluoroethane (CFC 113)	0.5		ND	ND
Methylene Chloride	0.5		ND	ND
trans-1,2-Dichloroethene	0.5		ND	ND
cis-1,2-Dichloroethene	0.5		ND	ND
1,1-Dichloroethane	0.5		ND	ND
Chloroform	0.5		ND	ND
1,1,1-Trichloroethane (TCA)	0.5		ND	ND
Carbon Tetrachloride	0.5		ND	ND
1,2-Dichloroethane	0.5		ND	ND
Trichloroethene (TCE)	0.5		ND	ND
1,2-Dichloropropane	0.5		ND	ND
Bromodichloromethane	0.5		ND	ND
2-Chloroethyl Vinyl Ether	5		ND	ND
trans-1,3-Dichloropropene	0.5		ND	ND
cis-1,3-Dichloropropene	0.5		ND	ND
1,1,2-Trichloroethane	0.5		ND	ND
Tetrachloroethene (PCE)	0.5		ND	ND
Dibromochloromethane	0.5		ND	ND
Chlorobenzene	0.5		ND	ND
Bromoform	0.5		ND	ND
1,1,2,2-Tetrachloroethane	0.5		ND	ND
1,3-Dichlorobenzene	1		ND	ND
1,4-Dichlorobenzene	1		ND	ND
1,2-Dichlorobenzene	1		ND	ND

Analytical Report

Client:	EMCON	**Service Request:**	L9700001
Project:	Federal Realty Trust/#22152-001.001	**Date Collected:**	12/31/96
Sample Matrix:	Water	**Date Received:**	1/2/97
		Date Extracted:	1/2/97

Organochlorine Pesticides
EPA Methods 3510/8080
Units: ug/L (ppb)

	Sample Name:	**MW-1**	**Method Blank**
	Lab Code:	L9700001-001	L970102-MB
	Date Analyzed:	1/2/97	1/2/97
Analyte	**MRL**		
Alpha-BHC	0.01	ND	ND
Gamma-BHC (Lindane)	0.01	ND	ND
Beta-BHC	0.04	ND	ND
Heptachlor	0.01	ND	ND
Delta-BHC	0.01	ND	ND
Aldrin	0.02	ND	ND
Heptachlor Epoxide	0.01	ND	ND
Endosulfan I	0.1	ND	ND
4,4'-DDE	0.01	ND	ND
Dieldrin	0.01	ND	ND
Endrin	0.05	ND	ND
4,4'-DDD	0.01	ND	ND
Endosulfan II	0.01	ND	ND
4,4'-DDT	0.02	ND	ND
Endrin Aldehyde	1.0	ND	ND
Endosulfan Sulfate	0.5	ND	ND
Methoxychlor	0.5	ND	ND
Toxaphene	1.0	ND	ND
Chlordane	1.0	ND	ND

97-036

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	EMCON	**Service Request:**	S9602302
Project:	Federal Realty Investment Trust/22152-001.001	**Date Collected:**	12/31/96
Sample Matrix:	Water	**Date Received:**	12/31/96
		Date Extracted:	12/3196
		Date Analyzed:	1/2/97

TPH as Diesel
California DHS LUFT Method
Units: ug/L (ppb)

Sample Name	**Lab Code**	**MRL**	**Result**
MW-1	S9602302-001	50	ND
Method Blank	S9601231-WB1	50	ND

97-036

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: EMCON
Project: Federal Realty Investment Trust/22152-001.001
Sample Matrix: Water

Service Request: S9602302
Date Collected: 12/31/96
Date Received: 12/31/96
Date Extracted: NA

BTEX, MTBE and TPH as Gasoline
EPA Methods 5030/8020/Caliornia DHS LUFT Method
Units: ug/L (ppb)

		Sample Name:	**MW-1**	**Method Blank**
		Lab Code:	S9602302-001	S970102-WB1
		Date Analyzed:	1/2/97	1/2/97
Analyte	**MRL**			
TPH as Gasoline	50		ND	ND
Benzene	0.5		ND	ND
Toluene	0.5		ND	ND
Ethylbenzene	0.5		ND	ND
Total Xylenes	0.5		ND	ND
Methyl *tert* -Butyl Ether	3		ND	ND

97 - 036

3S22/060194

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: EMCON
Project: Federal Realty Investment Trust/22152-001.001
Sample Matrix: Water

Service Request: S9602302
Date Collected: 12/31/96
Date Received: 12/31/96
Date Extracted: NA
Date Analyzed: NA

Surrogate Recovery Summary
Halogenated Volatile Organic Compounds
EPA Methods 8010

Sample Name	Lab Code	Percent Recovery 4-Bromofluorobenzene
MW-1	S9602302-001	94
Method Blank	S961231-WB1	83

CAS Acceptance Limits: 74-125

97-036

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: EMCON
Project: Federal Realty Trust/#22152-001.001
Sample Matrix: Water

Service Request: L9700001
Date Collected: NA
Date Received: NA
Date Extracted: 1/2/97
Date Analyzed: 1/2/97

Surrogate Recovery Summary
Organochlorine Pesticides and Polychlorinated Biphenyls (PCBs)
EPA Methods 3510/8080

Sample Name	**Lab Code**	**Percent Recovery** Tetrachloro-*m* -xylene
MW-1	L9700001-001	94
Method Blank	L970102-MB	90

CAS Acceptance Limits: 45-140

97-036

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: EMCON
Project: Federal Realty Investment Trust/22152-001.001
Sample Matrix: Water

Service Request: S9602302
Date Collected: 12/31/96
Date Received: 12/31/96
Date Extracted: NA
Date Analyzed: 1/2/97

Surrogate Recovery Summary
TPH as Diesel
California DHS LUFT Method

Sample Name	**Lab Code**	**Percent Recovery** p-Terphenyl
MW-1	S9602302-001	82
Method Blank	S9601231-WB1	85

CAS Acceptance Limits: 50-140

SUR1/062994

97-036

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	EMCON	**Service Request:**	S9602302
Project:	Federal Realty Investment Trust/22152-001.001	**Date Collected:**	12/31/96
Sample Matrix:	Water	**Date Received:**	12/31/96
		Date Extracted:	NA
		Date Analyzed:	NA

Surrogate Recovery Summary
BTEX, MTBE and TPH as Gasoline
EPA Methods 5030/8020/California DHS LUFT Method

Sample Name	**Lab Code**	**PID Detector Percent Recovery** 4-Bromofluorobenzene	**FID Detector Percent Recovery** α,α,α−Trifluorotoluene
MW-1	S9602302-001	94	88
Method Blank	S970102-WB1	102	87
	CAS Acceptance Limits:	69-116	69-116

97-036

SUR2/060194

Analytical Services
2059 Junction Avenue • San Jose, CA 95131 • (408) 437-2400 • FAX (408) 437-9356

Realty Investment Trust

CHAIN OF CUSTODY/LABORATORY ANALYSIS REPORT FORM

SERVICE REQUEST NO. 59602302 P.O.# PAGE ___ OF ___

PROJECT NAME Federal # 22152001001
PROJECT MGR. M Smolley
COMPANY Emcon
ADDRESS San Jose
PHONE
FAX
SAMPLER'S SIGNATURE

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	NUMBER OF CONTAINERS	Base/Neu/Acid Organics GC/MS 625/8270	Volatile Organics GC/MS 624/8240/8260	Halogenated or Aromatic Volatiles 601/8010 602/8020	TPH as Gas/BTEX DHS LUFT / 8020	TPH as Diesel DHS LUFT /HBHC +MTBE by Ak Confirm [illegible]	TRPH - 418.1 Oil and Grease Method	Metals (total or dissolved) List Below	pH, Cond, Cl, SO4, F, TDS, TSS Alk, NO3, NO2 (circle)	NH3-N, COD, Total-P, TKN, NO3 / NO2 (circle)	Total Organic Carbon TOC	Total Phenols Method	Cyanide	Pesticides (8080)			REMARKS
PRESERVATIVE						NP	HCl	HCl	HCl	NP	HCl	HNO3	NP	H2SO4	H2SO4	H2SO4	NaOH	NP			
MW-1	12-31-96	1150		Water	8			2X	2X	2X								2X			All 4 VOAs contain significant sediment

	RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature	Joe Willis	Joanne Brown		
Printed Name	Joe Willin	Joanne Brown		
Firm	Emcon	CAS		
Date/Time	12-31-96 1240	12-31-97 1240		

TURNAROUND REQUIREMENTS
___ 1 day [✓ X 2 day] ___ 3 day
___ 5 day ___ Other
___ Standard (10 working days)
___ Provide Preliminary Results
Date Due
Need results by 1-3-97

REPORT REQUIREMENTS
[✓ X I Routine Report]
___ II Report (includes DUP MAS MSD, as required may be charged as samples)
___ III Data Validation Report (includes All Raw Data)
___ RWQCB (MDLs/PQLs/TRACE#)

	RELINQUISHED BY:	RECEIVED BY:
Signature		
Printed Name		
Firm		
Date/Time		

SPECIAL INSTRUCTIONS/COMMENTS:
Circle which metals are to be analyzed:
Metals: Al Sb Ba Be B Cd Ca Cr Co Cu Fe Mg Mn Mo Ni K Ag Na Sn V Zn
As Pb Se Tl Hg

A8, R9, R20/S4

97-036

DISTRIBUTION. WHITE - return to originator; YELLOW - lab; PINK - retained by originator

400

Columbia
Analytical
Services inc.

December 31, 1996

Service Request No.: S9602255

Mr. Mark Smolley
EMCON
1921 Ringwood Avenue
San Jose, CA 95131

RE: **Town & Country/Federal Realty Investment Trust / #22152-001.001**

Dear Mr. Smolley:

The following pages contain analytical results for sample(s) received by the laboratory on December 20, 1996. Results of sample analyses are followed by Appendix A which contains sample custody documentation and quality assurance deliverables requested for this project. The work requested has been assigned the Service Request No. listed above. To help expedite our service, please refer to this number when contacting the laboratory.

Analytical results were produced by procedures consistent with Columbia Analytical Services' (CAS) Quality Assurance Manual (with any deviations noted). Signature of this CAS Analytical Report below confirms that pages 2 through 11, following, have been thoroughly reviewed and approved for release in accord with CAS Standard Operating Procedure ADM-DatRev3.

Please feel welcome to contact me should you have questions or further needs.

Sincerely,

Steven L. Green
Project Chemist

97-036

COLUMBIA ANALYTICAL SERVICES, Inc.
Acronyms

A2LA	American Association for Laboratory Accreditation
ASTM	American Society for Testing and Materials
BOD	Biochemical Oxygen Demand
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes
CAM	California Assessment Metals
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
COD	Chemical Oxygen Demand
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DLCS	Duplicate Laboratory Control Sample
DMS	Duplicate Matrix Spike
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
IC	Ion Chromatography
ICB	Initial Calibration Blank sample
ICP	Inductively Coupled Plasma atomic emission spectrometry
ICV	Initial Calibration Verification sample
J	Estimated concentration. The value is less than the MRL, but greater than or equal to the MDL. If the value is equal to the MRL, the result is actually <MRL before rounding.
LCS	Laboratory Control Sample
LUFT	Leaking Underground Fuel Tank
M	Modified
MBAS	Methylene Blue Active Substances
MCL	Maximum Contaminant Level. The highest permissible concentration of a substance allowed in drinking water as established by the U. S. EPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
MS	Matrix Spike
MTBE	Methyl tert-Butyl Ether
NA	Not Applicable
NAN	Not Analyzed
NC	Not Calculated
NCASI	National Council of the paper industry for Air and Stream Improvement
ND	Not Detected at or above the method reporting/detection limit (MRL/MDL)
NIOSH	National Institute for Occupational Safety and Health
NTU	Nephelometric Turbidity Units
ppb	Parts Per Billion
ppm	Parts Per Million
PQL	Practical Quantitation Limit
QA/QC	Quality Assurance/Quality Control
RCRA	Resource Conservation and Recovery Act
RPD	Relative Percent Difference
SIM	Selected Ion Monitoring
SM	Standard Methods for the Examination of Water and Wastewater, 18th Ed., 1992
STLC	Solubility Threshold Limit Concentration
SW	Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 3rd Ed., 1986 and as amended by Updates I, II, IIA, and IIB.
TCLP	Toxicity Characteristic Leaching Procedure
TDS	Total Dissolved Solids
TPH	Total Petroleum Hydrocarbons
tr	Trace level. The concentration of an analyte that is less than the PQL but greater than or equal to the MDL. If the value is equal to the PQL, the result is actually <PQL before rounding.
TRPH	Total Recoverable Petroleum Hydrocarbons
TSS	Total Suspended Solids
TTLC	Total Threshold Limit Concentration
VOA	Volatile Organic Analyte(s)

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	EMCON	**Service Request:**	L9605105
Project:	Federal Realty Investement Trust/#22152-001.001	**Date Collected:**	12/20/96
Sample Matrix:	Water	**Date Received:**	12/20/96
		Date Extracted:	12/26/96

Organochlorine Pesticides
EPA Methods 3510/8080
Units: ug/L (ppb)

	Sample Name:	**MW-2**	**MW-3**	**Method Blank**
	Lab Code:	L9605105-001	L9605105-002	L961226-MB
	Date Analyzed:	12/27/96	12/27/96	12/27/96
Analyte	**MRL**			
Alpha-BHC	0.01	ND	ND	ND
Gamma-BHC (Lindane)	0.01	ND	ND	ND
Beta-BHC	0.04	ND	ND	ND
Heptachlor	0.01	ND	ND	ND
Delta-BHC	0.01	ND	ND	ND
Aldrin	0.02	ND	ND	ND
Heptachlor Epoxide	0.01	ND	ND	ND
Endosulfan I	0.1	ND	ND	ND
4,4'-DDE	0.01	ND	ND	ND
Dieldrin	0.01	ND	ND	ND
Endrin	0.05	ND	ND	ND
4,4'-DDD	0.01	ND	ND	ND
Endosulfan II	0.01	ND	ND	ND
4,4'-DDT	0.02	ND	ND	ND
Endrin Aldehyde	1.0	ND	ND	ND
Endosulfan Sulfate	0.5	ND	ND	ND
Methoxychlor	0.5	ND	ND	ND
Toxaphene	1.0	ND	ND	ND
Chlordane	1.0	ND	ND	ND

97-036

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: EMCON
Project: Federal Realty Investement Trust/#22152-001.001
Sample Matrix: Water

Service Request: L9605105
Date Collected: 12/20/96
Date Received: 12/20/96
Date Extracted: NA

Halogenated Volatile Organic Compounds
EPA Methods 5030/8010
Units: ug/L (ppb)

	Sample Name:	**MW-2**	**MW-3**	**Method Blank**
	Lab Code:	L9605105-001	L9605105-002	L961227-MB
	Date Analyzed:	12/28/96	12/28/96	12/27/96
Analyte	**MRL**			
Dichlorodifluoromethane (CFC 12)	1	ND	ND	ND
Chloromethane	1	ND	ND	ND
Vinyl Chloride	0.5	ND	ND	ND
Bromomethane	0.5	ND	ND	ND
Chloroethane	0.5	ND	ND	ND
Trichlorofluoromethane (CFC 11)	0.5	ND	ND	ND
1,1-Dichloroethene	0.5	ND	ND	ND
Methylene Chloride	0.5	ND	ND	ND
trans-1,2-Dichloroethene	0.5	ND	ND	ND
cis-1,2-Dichloroethene	0.5	ND	ND	ND
1,1-Dichloroethane	0.5	ND	ND	ND
Chloroform	0.5	ND	ND	ND
1,1,1-Trichloroethane (TCA)	0.5	ND	ND	ND
Carbon Tetrachloride	0.5	ND	ND	ND
1,2-Dichloroethane	0.5	ND	ND	ND
Trichloroethene (TCE)	0.5	ND	ND	ND
1,2-Dichloropropane	0.5	ND	ND	ND
Bromodichloromethane	0.5	ND	ND	ND
2-Chloroethyl Vinyl Ether	5	ND	ND	ND
trans-1,3-Dichloropropene	0.5	ND	ND	ND
cis-1,3-Dichloropropene	0.5	ND	ND	ND
1,1,2-Trichloroethane	0.5	ND	ND	ND
Tetrachloroethene (PCE)	0.5	ND	ND	ND
Dibromochloromethane	0.5	ND	ND	ND
Chlorobenzene	0.5	ND	ND	ND
Bromoform	0.5	ND	ND	ND
1,1,2,2-Tetrachloroethane	0.5	ND	ND	ND
1,3-Dichlorobenzene	1	ND	ND	ND
1,4-Dichlorobenzene	1	ND	ND	ND
1,2-Dichlorobenzene	1	ND	ND	ND
Trichlorotrifluoroethane (Freon 113)	2	ND	ND	ND

97-036

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: EMCON
Project: Town & Country/Federal Realty Investment Trust/22152-001.001
Sample Matrix: Water

Service Request: S9602255
Date Collected: 12/20/96
Date Received: 12/20/96
Date Extracted: NA
Date Analyzed: 12/26/96

BTEX and TPH as Gasoline
EPA Methods 5030/8020/California DHS LUFT Method

	Analyte:	**TPH as Gasoline**	**Benzene**	**Toluene**	**Ethylbenzene**	**Xylenes, Total**
	Units:	ug/L (ppb)	ug/L (ppb)	ug/L (ppb)	ug/L (ppb)	ug/L (ppb)
	Method Reporting Limit:	50	0.5	0.5	0.5	0.5
Sample Name	**Lab Code**					
MW-2	S9602255-001	ND	ND	ND	ND	ND
MW-3	S9602255-002	ND	ND	ND	ND	ND
Method Blank	S961226-WB1	ND	ND	ND	ND	ND

97 - 036

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	EMCON	**Service Request:**	S9602255
Project:	Town & Country/Federal Realty Investment Trust/22152-001.001	**Date Collected:**	12/20/96
Sample Matrix:	Water	**Date Received:**	12/20/96
		Date Extracted:	12/22/96
		Date Analyzed:	12/22/96

TPH as Diesel
California DHS LUFT Method
Units: ug/L (ppb)

Sample Name	Lab Code	MRL	Result
MW-2	S9602255-001	50	200A, B
MW-3	S9602255-002	50	ND C
Method Blank	S9901222-WB1	50	ND

A	Quantitated as diesel. The samples contained components that eluted in the diesel range, The chromatograms did not match the typical fingerprint.
B	The sample also contained heavy oil at 670 ppb.
C	The sample also contained heavy oil at 190 ppb

97 - 036

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	EMCON	**Service Request:**	L9605105
Project:	Federal Realty Investement Trust/#22152-001.001	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	NA

Surrogate Recovery Summary
Organochlorine Pesticides and Polychlorinated Biphenyls (PCBs)
EPA Methods 3510/8080

Sample Name	**Lab Code**	**Percent Recovery** Tetrachloro-*m* -xylene
MW-2	L9605105-001	91
MW-3	L9605105-002	97
Method Blank	L961226-MB	89

CAS Acceptance Limits: 45-140

SUR1/120594

97 - 036

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: EMCON
Project: Federal Realty Investement Trust/#22152-001.001
Sample Matrix: Water

Service Request: L9605105
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: NA

Surrogate Recovery Summary
Halogenated Volatile Organic Compounds
EPA Methods 5030/8010

Sample Name	**Lab Code**	**Percent Recovery** 4-Bromochlorobenzene
MW-2	L9605105-001	94
MW-3	L9605105-002	99
Method Blank	L961227-MB	93

CAS Acceptance Limits: 70-125

97-036

SUR1/120594

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: EMCON
Project: Town & Country/Federal Realty Investment Trust/22152-001.001
Sample Matrix: Water

Service Request: S9602255
Date Collected: 12/20/96
Date Received: 12/20/96
Date Extracted: NA
Date Analyzed: NA

Surrogate Recovery Summary
BTEX and TPH as Gasoline
EPA Methods 5030/8020/California DHS LUFT Method

Sample Name	**Lab Code**	**PID Detector Percent Recovery** 4-Bromofluorobenzene	**FID Detector Percent Recovery** α,α,α−Trifluorotoluene
MW-2	S9602255-001	105	95
MW-3	S9602255-002	104	91
Method Blank	S961226-WB1	102	91
	CAS Acceptance Limits:	69-116	69-116

97-036

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: EMCON
Project: Town & Country/Federal Realty Investment Trust/22152-001.001
Sample Matrix: Water

Service Request: S9602255
Date Collected: 12/20/96
Date Received: 12/20/96
Date Extracted: NA
Date Analyzed: 12/22/96

Surrogate Recovery Summary
TPH as Diesel
California DHS LUFT Method

Sample Name	**Lab Code**	**Percent Recovery** p-Terphenyl
MW-2	S9602255-001	89
MW-3	S9602255-002	103
Method Blank	S9901222-WB1	89

CAS Acceptance Limits: 50-140

97-038

SUR1/062994

EMCON - San Jose

CHAIN OF CUSTODY / LABORATORY ANALYSIS REQUEST FORM

1921 Ringwood Avenue, San Jose, CA 95131 (408) 453-7300 FAX (408) 437-9526

S9602255

Date ______ Page ___ of ___

Project Name: Federal Realty Investment Trust
Project Number: 22152-001.001
Project Manager: Mark Smolley

Company/Address: EMCON
1921 Ringwood Ave.
San Jose, CA 95131
Phone: (408) 453-7300

Sampler's Signature

						Analysis Requested										
Sample I.D.	Date	Time	LAB I.D.	Sample Matrix	Number of Containers	VOCs (EPA Method 8010)	TPHG/ BTEX (EPA Methods 8020/ 8015)	Diesel (EPA Method 8015)	Pesticides (EPA Method 8080)							REMARKS
						HCL	HCL	NP	NP							Preservations
MW-1	—	—	—	H2O	~~8~~	~~X~~	~~X~~	~~X~~	~~X~~							
MW-2	12/20/96	0940	①	H2O	8	X	X	X	X							VOAs have sediments
MW-3	↓	1140	②	H2O	8	X	X	X	X							VOAs have sediments

Relinquished By	Received By
Signature	Signature
Manuel Gallegos	Joanne Brown
Printed Name	Printed Name
EMCON	CAS
Firm	Firm
12/20/96 12:40	12/20/96 12:40
Date/Time	Date/Time

Relinquished By	Received By
Signature	Signature
Printed Name	Printed Name
Firm	Firm
Date/Time	Date/Time

TURNAROUND REQUIREMENTS

___ 24 hr ___ 48 hr ___ 5 day
X Standard (~10-15 working days)
___ Provide Verbal Preliminary Results
___ Provide FAX Preliminary Results
Requested Report Date ______

REPORT REQUIREMENTS

X I. Routine Report
___ II. Report (includes DUP, MS MSD, as required, may be charged as samples)
___ III. Data Validation Report (includes All Raw Data)
___ RWQCB (MDLs/PQLs/TRACE#)

INVOICE INFORMATION

P O # ______
Bill to: ______

SAMPLE RECEIPT

Shipping VIA: ______
Shipping #: ______
Condition: ______
Lab No: ______

Special Instructions/Comments:

R9, R20/S29

97-036

Subcontract

EMCON LABORATORY ANALYSIS REQUEST FORM

1921 Ringwood Avenue, San Jose, CA 95131 (408) 453-7300 FAX (408) 437-9526

S9602255

Date ______ Page ___ of ___

Project Name: Federal Realty Investment Trust
Project Number: 22152-001.001
Project Manager: Mark Smolley
L9605105

Company/Address: EMCON
1921 Ringwood Ave.
San Jose, CA 95131
Phone: (408) 453-7300

Sampler's Signature

						Analysis Requested										
					Number of Containers	VOCs (EPA Method 8010)	(8020/ 8015)	(8015)	Pesticides (EPA Method 8080)							REMARKS
Sample I.D.	Date	Time	LAB I.D.	Sample Matrix		HCL	HCL	NP	NP							Preservations
~~MW-1~~	—	—	—	~~H2O~~	~~8~~	~~X~~	~~X~~		~~X~~							
MW-2	12/20/96	0940	①	H2O	8	X	X	X	X							VOAs have sediments
MW-3	↓	1140	②	H2O	8	X	X	X	X							VOAs have sediments

Relinquished By
Signature
Manuel Gallegos
Printed Name
EMCON
Firm
12/20/96 / 12:40
Date/Time

Received By
Signature
Printed Name
Firm
Date/Time

Relinquished By
Joanne Brown
Signature
Joanne Brown
Printed Name
CAS-SJ
Firm
12/20/96 1930
Date/Time

Received By
Signature
A. BRAGAIN
Printed Name
CAS-CP
Firm
12/21/96 0930
Date/Time

TURNAROUND REQUIREMENTS
___ 24 hr ___ 48 hr [✓ 5 day]
___ Standard (~10-15 working days)
___ Provide Verbal Preliminary Results
___ Provide FAX Preliminary Results
Requested Report Date 12/30

REPORT REQUIREMENTS
X I. Routine Report
___ II. Report (Includes DUP, MS, MSD, as required, may be charged as samples)
___ III. Data Validation Report (Includes All Raw Data)
___ RWQCB (MDLs/PQLs/TRACE#)

INVOICE INFORMATION
P.O. # ______
Bill to ______

SAMPLE RECEIPT
Shipping VIA ______
Shipping #: ______
Condition ______
Lab No. S9602255

Special Instructions/Comments:

Intact/Cool

LLAB: 8010, 8080 Pest.

R9, R20/S29

APPENDIX F

UNCERTAINITY ANALYSIS

UNCERTAINTY ANALYSIS

Uncertainties

Risk estimates are values that have uncertainties associated with them. These uncertainties, which arise at every step of a risk assessment, are evaluated to provide an indication of the relative degree of uncertainty associated with a risk estimate. In this section, a qualitative discussion of the uncertainties associated with the development of the risk estimates for the site is presented.

Risk assessments are not intended to estimate actual risks to receptors associated with exposure to chemicals in the environment. In fact, accurately estimating actual risks is not possible because of the variability in the exposed or potentially exposed populations. Therefore, risk assessment is a means of estimating the probability that an adverse health effect (*e.g.*, cancer, impaired reproduction) will occur for a receptor. The multitude of conservative assumptions used in risk assessments insures that the risk estimates are not likely to be underestimated.

Risk estimates are calculated by combining site data, assumptions about individual receptor's exposures to impacted media, and toxicity data. The uncertainties in this PEA relevant to the risk evaluation can be grouped into four main categories that correspond to these steps:

- Uncertainties in environmental sampling and analysis
- Uncertainties in fate and transport modeling.
- Uncertainties in assumptions concerning exposure scenarios
- Uncertainties in toxicity data and dose-response extrapolations

Environmental Sampling and Analysis

Risk estimates developed for the site are based on the sampling results obtained from the previous investigations. Errors in sampling results can arise from the field sampling, laboratory analyses, and data analyses. Errors in laboratory analysis procedures are possible, although the impacts of these sorts of errors on the risk estimates are likely to be low. The environmental sampling at the site is one source of uncertainty in the evaluation. However, sampling was conducted in areas of known releases and in the area slated for residential development, and the highest overall concentrations of the chemicals were used in the HHSE. Therefore, the sampling and analysis data should be sufficient to conservatively characterize the impacts and the associated potential risks. Actual concentrations in soil across the site are likely to be lower than the measured concentrations, so risks are likely overestimated.

Fate and Transport Modeling

The assumptions and uncertainties inherent in the fate and transport modeling conducted at the site (i.e., dermal absorption and particulate and volatile air concentrations) are intended to overestimate actual exposures and thus be protective of human health. Air modeling was conducted according to PEA guidance, which is intended to conservatively estimate possible exposures and risks.

Exposure Assessment

In this report, the exposure assessment is based on a number of assumptions with varying degrees of uncertainty. Uncertainties can arise from the types of exposures examined, the points of potential human exposure, the concentrations of chemicals at the points of human exposure, and the intake assumptions. These factors and the ways in which they contribute to the risk estimation are discussed below.

Types of Exposures Examined. The selection of exposure pathways is a process, often based on best professional judgment, that attempts to identify the most probable potentially harmful exposure scenarios. In an evaluation, risks are sometimes not calculated for all of the exposure pathways that may occur, possibly causing some underestimation of risk. In this evaluation, potential risks were estimated for a residential scenario at the site. Risks to potential receptors were estimated for a number of different exposure pathways (*e.g.*, inhalation of dusts). While other exposure routes could exist for the site, these exposures are expected to be lower than the risks associated with the pathways considered. Therefore, elimination of these exposure pathways is not likely to result in underestimation of risk. This is consistent with the intent of the PEA process (California, 1994).

Points of Human Exposure and Concentrations of Chemicals at Points of Exposure. Two more sources of uncertainty in the exposure assessment are the assumptions made regarding the locations where individuals could be exposed to impacted media at the site and the concentrations of chemicals at the points of exposure. In this assessment, conservative assumptions were made to indicate the locations where people could come into contact with impacted media (e.g., beneath pavement to directly contact benzene in soil. For example, it was assumed that the entire site was unpaved and that receptors could directly contact chemicals in subsurface soils.

Intake Assumptions Used. The risks calculated depend largely on the assumptions used to calculate the rate of chemical intake. For this assessment, the assumptions recommended by PEA guidance were used. The uncertainties associated with the parameters used in this HHSE are intended to overestimate exposures (California, 1994).

Toxicological Data and Dose Response Extrapolations

The availability and quality of toxicological data is another source of uncertainty in the risk assessment. Uncertainties associated with animal and human studies may have influenced the toxicity values. Carcinogenic values are classified according to the amount of evidence available that suggests human carcinogenicity. U.S. EPA assigns each carcinogen a designation of A through E, dependent upon the strength of the scientific evidence for carcinogenicity. In the establishment of non-cancer values, conservative multipliers, known as uncertainty and modifying factors, are used.

Uncertainties in Animal and Human Studies. Extrapolation of toxicological data from animal tests is one of the largest sources of uncertainty in a risk assessment. There may be important, but unidentified, differences in uptake, metabolism, and distribution of chemicals in the body between the test species and humans. For the most part, these uncertainties are addressed through use of conservative assumptions in establishing values for RfDs and SFs, which results in the likelihood that the estimated risk is overstated.

Typically, animals are administered high doses (*e.g.*, maximum tolerated dose) of a chemical in a standard diet or in air. Humans may be exposed to much lower doses in a highly variable diet, which may affect the toxicity of the chemical. In these studies, animals, usually laboratory rodents, are exposed daily to the chemical agent for various periods of time up to their 2-year lifetimes. Humans have an average 70-year lifetime and may be exposed either intermittently or regularly for an exposure period ranging from months to a full lifetime. Because of these differences, animal to human extrapolation error is a large source of uncertainty in a risk assessment.

Non-Cancer Toxicity Values. In the establishment of non-cancer values, conservative multipliers, known as uncertainty factors (UFs), are used. The chronic non-cancer toxicity values that was located in the IRIS database (for DDT) has a UF of 100. This means that the dose corresponding to a toxicological endpoint (*e.g.*, LOAEL) was divided by 100; thus increasing the apparent toxicity of the chemical by two orders of magnitude. The purpose of the UF is to account for the extrapolation of toxicity data from animals to humans with the additional the goal of the protection of sensitive individuals. However, in accomplishing these things, the conservativeness and uncertainty in the value is greatly increased.

Carcinogenic Toxicity Values. Uncertainty due to extrapolation of toxicological data for potential carcinogens tested in animals to human data is more prominent for potentially carcinogenic chemicals than non-carcinogenic ones. U.S. EPA typically uses the linearized multistage (LMS) model to extrapolate toxicological data. The LMS assumes that there is no threshold for carcinogenic substances; that is, exposure to even one molecule of a carcinogen is sufficient to cause cancer. This is a highly conservative assumption because the body has several mechanisms to protect against cancer.

The use of the LMS model to extrapolate data from animals to humans is a well-recognized source of significant uncertainty in the development of carcinogenic toxicity values and, subsequently, carcinogenic risk estimates. At high levels of exposure, there may indeed be a risk of cancer regardless of whether the effect occurs via a threshold mechanism or not. However, an animal bioassay cannot determine what happens at low levels of exposure, which is generally typical of human exposure levels.

At low levels of exposure, the probability of cancer cannot be measured but must be extrapolated from higher dosages. To do this, animals are typically exposed to carcinogens at levels that are orders of magnitude greater than those likely to be encountered by humans in the environment. It would be difficult, if not impossible, to perform animal experiments with a large enough number of animals to directly estimate the level of risk at the low exposure levels typically encountered by humans. Thus, to estimate the risk to humans exposed at low levels, dose-response data derived from animals given high dosages are extrapolated downward using mathematical models such as the LMS, which assumes that there is no threshold of response. The dose-response curve generated by the model is known as the maximum likelihood estimate (MLE). The slope of the 95 percent lower confidence interval (*i.e.*, upper bound limit) curve, which is a function of the variability in the input animal data, is taken as the SF. SFs are then used directly in cancer risk assessment.

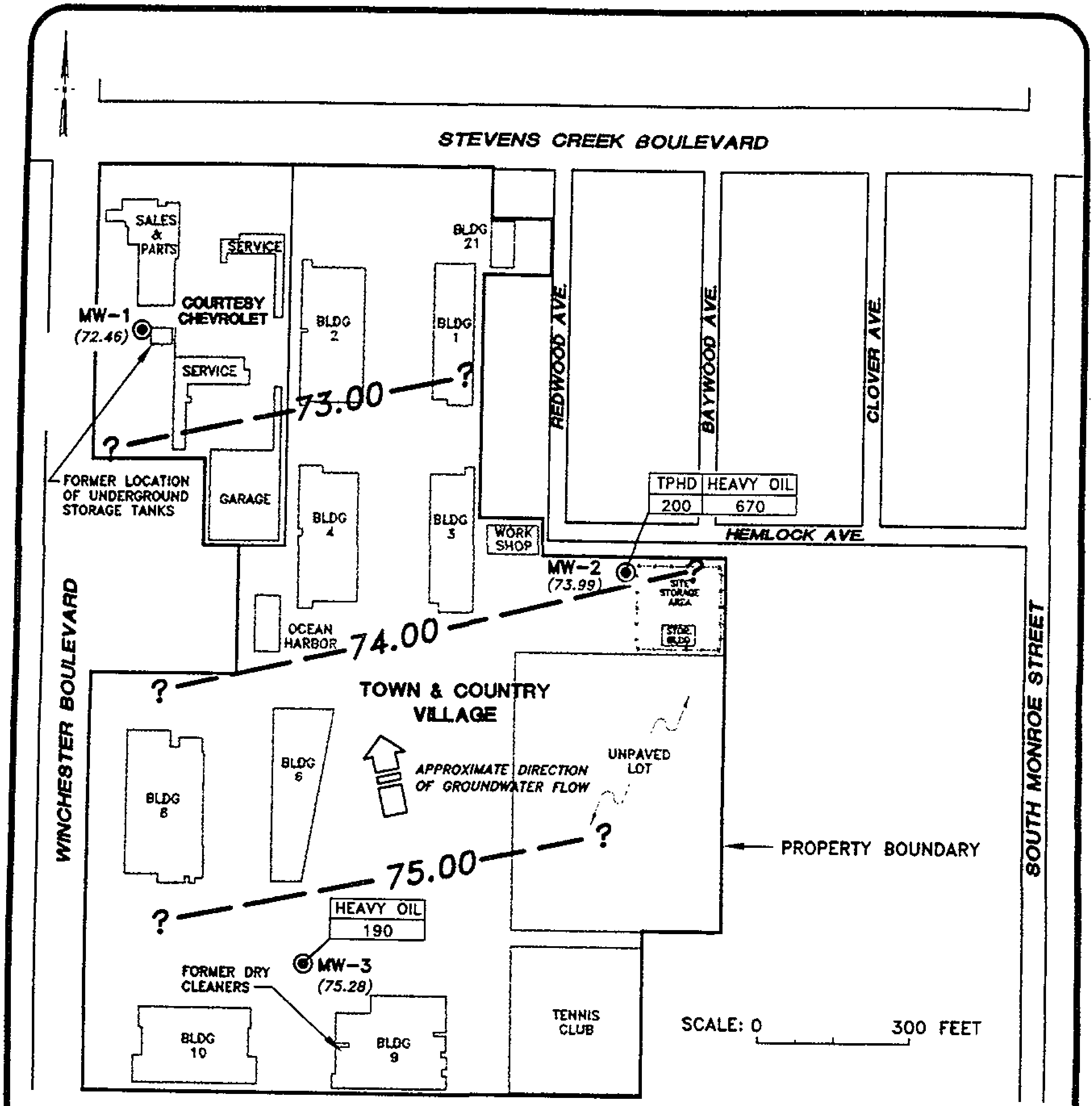
The federal government, including USEPA, has acknowledged the limitations of the high-to-low dose extrapolation models, particularly the LMS (USEPA, 1991). In fact, this aspect of cancer risk assessment has been criticized by many scientists (including regulatory scientists) in recent years. USEPA has recently proposed revisions to the 1986 cancer risk assessment guidelines to move away from dependence on this model (USEPA, 1996a).

Even for genotoxic (*i.e.*, non-threshold) substances, there are two major sources of bias embedded in the LMS: (1) its inherent conservatism at low doses and (2) the routine use of the linearized form in which the 95 percent upper confidence interval is used instead of the unbiased MLE. The inherent conservatism at low doses is due in part to the fact that the LMS ignores all of the numerous biological factors that argue against a linear dose response relationship for genotoxic effects (*e.g.*, DNA repair, immunosurveillance, toxicokinetic factors).

Even if studies of chemical effect in humans are available (*e.g.*, for benzene), they generally are for workplace exposures far in excess of those expected in the environment. Uncertainties can be large because the activity patterns, exposure duration and frequency, individual susceptibility, and dose may not be the same in the study populations as in the individuals exposed to environmental concentrations. Because conservative methods are used in developing the RfDs and CSFs, the possibility of underestimating risks is low.

Combinations of Sources of Uncertainty

Uncertainties from different sources are compounded in the HHSE. For example, if a person's daily intake rate for a chemical is compared to an RfD to estimate potential health risks, the uncertainties in the concentration measurements, exposure assumptions, and toxicities will all be expressed in the result. Therefore, by combining all upper-bound numbers, the uncertainty is compounded, and the resulting risk estimate is above the 90th or 95th percentile, perhaps even greater than the 99th percentile, of the risks likely to result from chemical exposure.



EXPLANATION

● MONITORING WELL

(72.46) GROUNDWATER ELEVATION (FT.-MSL); MEASURED 1/8/97

?— — GROUNDWATER ELEVATION CONTOUR (FT.-MSL)

HEAVY OIL
190

CHEMICAL CONCENTRATION IN GROUNDWATER (ug/L). SEE NOTE.

NOTE:

GROUNDWATER SAMPLES ANALAYZED FOR TPHG, BTEX, MTBE, TPHD, ORGANOCHLORINE, PESTICIDES, AND VOCs. ONLY THOSE COMPOUNDS DETECTED ARE SHOWN ON THIS FIGURE.

EA-SANJOSE-CAD/DRAWINGS: I:\2152001\GWSUM.dwg Xrefs: <NONE> Time: 2:13 PM Operator: KLT
Scale: 1 = 300.00 DimScale: 1 = 300.00 Date: 1/17/97

EMCON

DATE JAN. 1997
DWN KMM
APP
REV 0
PROJECT NO.
2152-001.001

Figure 4
FEDERAL REALTY INVESTMENT TRUST
TOWN & COUNTRY VILLAGE
STEVENS CREEK BLVD. – SAN JOSE, CA

GROUNDWATER SUMMARY MAP

97-036

APPENDIX F

SITE CHARACTERIZATION REPORT

EMCON
1921 Ringwood Avenue • San Jose, California 95131-1721 • (408) 453-7300 • Fax (408) 437-9526

ENVIRONMENTAL
2 - 97

March 21, 1997
Project 22152-001.001

Ms. Nancy Herman
Federal Realty Investment Trust
1626 East Jefferson Street
Rockville, Maryland 20852-4041

Re: Site Characterization Report, Town & Country Village Shopping Center, San Jose, California

Dear Ms. Herman:

This letter report documents the results of site characterization activities conducted at the Town & Country Village Shopping Center (TCVSC, Site), 2980 Stevens Creek Boulevard, San Jose, California. The site characterization was conducted to delineate the extent of tetrachloroethene (PCE) impact associated with a former dry cleaners and to delineate the extent of elevated arsenic and lead concentrations detected in the southeastern corner of the Site. This letter report is provided as an addendum to EMCON's *Environmental Site Assessment, Town and Country Village Shopping Center, San Jose, California*, dated January 20, 1997.

SCOPE OF WORK

EMCON's scope of work for this investigation, as approved by the California Department of Toxic Substances Control (DTSC), included the following:

- Collect soil samples from 7 direct push technology (DPT) borings to delineate the extent of PCE impact associated with the former dry cleaners.
- Collect soil samples from 5 DPT borings to delineate the extent of elevated arsenic and lead concentrations previously detected in a sample from boring EB-5.
- Selectively analyze the soil samples for PCE, arsenic, and lead.
- Revise the human health screening evaluation (HHSE) for the Site based on the new analytical results.

- Measure depth to groundwater in the three existing on-site wells to confirm the direction of groundwater flow.
- Prepare a figure showing the individual pesticides concentrations detected in all soil samples collected from the Site
- Prepare a report describing the procedures, findings, and conclusions for the Site.

SITE CHARACTERIZATION PROCEDURES

Before field activities, EMCON obtained a soil boring permit (Appendix A) as required from the Santa Clara Valley Water District. In addition, EMCON cleared underground utilities at the borehole locations by contacting Underground Services Alert (USA) and a private utility locator. The following sections summarize the soil sampling, laboratory analyses, groundwater level measuring, and the pesticide evaluation.

Soil Sampling

On February 6 and 7, 1997, EMCON collected soil samples from borings EB-11 through EB-16 within and adjacent to the former dry cleaning facility, and from borings EB-17 through EB-21 in the vicinity of boring EB-5, where the elevated arsenic and lead concentrations were previously detected (Drawings 1 and 2). Subsequent sampling (boring EB-22) was conducted in the former dry cleaning area on February 28, 1997. The boring locations within and adjacent to the former dry cleaning facility were located in the area of the former dry cleaning machine and along the sewer line that serviced the dry cleaning machine. The borings associated with the former dry cleaner were drilled to depths of approximately 20 feet below the ground surface (BGS), except for boring EB-22 which was drilled to 45 feet BGS. This boring was drilled to delineate the vertical extent of PCE in soil detected in the February 6 and 7, 1997, borings. The borings in the area of the elevated lead and arsenic concentrations were drilled to depths of 10 feet BGS.

The borings were drilled with a direct push technology (DPT) drilling rig. The DPT drilling rig advances a boring by pushing a 1.5-inch diameter steel rod into the ground. Once the appropriate sample depth is reached, the rod is removed from the boring and a steel sampler is lowered to the base of the boring. The sampler has a retractable tip which is removed, and the sampler is pushed 2 feet into undisturbed soil to collect the sample. Soil samples were collected in brass and acetate tubes to contain soil samples for laboratory analyses. The tubes were covered at each end with Teflon® squares and capped with plastic end caps. Borings were logged from an unused portion of the sample to describe the subsurface lithology. Additionally, a photoionization detector (PID) was used in the field during the PCE-soil sampling to assist with sample selection. Logs of exploratory borings EB-11 through EB-22 are presented in Appendix B.

Upon completion of sampling, the DPT boreholes were backfilled to the surface with Portland cement. Soil samples were transported in a cooler to a state-certified laboratory along with appropriate chain-of-custody documentation.

The DPT drill rods and sampling equipment were washed in a liquinox-water solution and double rinsed in water to prevent cross contamination. The decontamination water was temporarily stored on site in a 55-gallon drum until results of the laboratory analyses of the soil samples could be evaluated.

Laboratory Analyses

To delineate the PCE in soil associated with the former dry cleaners and the elevated arsenic and lead concentrations in the southeastern corner of the Site, 53 soil samples were analyzed. Soil samples from borings EB-11 through EB-16, and EB-22 were analyzed for volatile organic compounds (VOCs) by U.S. Environmental Protection Agency (USEPA) method 8010 or 8260. Samples from borings EB-17 through EB-21 were analyzed for arsenic and lead by USEPA 6010/7000 series. Samples from all borings, except EB-22, were analyzed by Columbia Analytical Services. Samples from EB-22 were analyzed in a mobile laboratory operated by Mobile Chem Labs, Inc. The analytical reports and chain-of-custody documentation for the samples are included in Appendix C.

Groundwater Level Measurements

Groundwater levels in the wells were measured on February 28, 1997, and again on March 4, 1997. The groundwater levels were measured to calculate groundwater elevations for the wells and confirm the groundwater gradient at the Site. The groundwater elevation data from the February 28, 1997 monitoring event was not consistent with the previous gradient data from the Site and was also not consistent with the regional groundwater gradient. For these reasons, EMCON re-measured depth to groundwater levels in the wells on March 4, 1997. The March 4, 1997 groundwater elevation data is presented on Figure 1. A summary of the monitoring data is presented in Table 1.

Pesticide Evaluation

Pesticides have been detected in soils during previous investigations conducted at the Site. The individual pesticide concentrations were evaluated in the HHSE section of the *Environmental Site Assessment* report. However, on the drawings presented in the *Environmental Site Assessment* report, the distribution of pesticides was shown as total pesticides. At the request of the DTSC, a map has been prepared depicting the distribution of the individual pesticide compounds (4-4'-DDE, 4-4'-DDT, and 4-4'-DDD), for the available data. The distribution of the individual pesticide compounds are shown in Drawing 3.

FINDINGS

This section presents findings based on observations recorded in the field, the results of the soil analyses, and the revised HHSE.

Subsurface Conditions

The soil consists predominantly of clay, silt, and sand mixtures to a depth of approximately 12 feet BGS which is underlain by coarser sands and gravels to the maximum depth explored, 46 feet BGS. This is consistent with previous investigations.

Based on the March 4, 1997, monitoring event, depth to groundwater ranged from 49 to 53 feet BGS. The groundwater flows toward the north-northwest at an approximate gradient of 0.002 foot per foot (ft/ft). Groundwater contours and flow direction are presented in Figure 1.

Analytical Results - Former Dry Cleaning Facility. PCE was detected in all the borings within the former dry cleaning facility. Overall, the highest concentration of PCE was 1.2 mg/kg detected in boring EB-11 at 3.5 feet BGS. This boring was drilled on the southwestern side of the former dry cleaning machine and was adjacent to the sewer line. After reviewing the data from borings EB-11 through EB-16, and at the request of DTSC, one additional boring (EB-22) was drilled to delineate the vertical extent of PCE impact. Soil samples from boring EB-22 detected low concentrations of PCE to a depth of 30 feet BGS. The three lower samples from 35, 40, and 45 feet BGS did not detect PCE indicating a vertical extent between 30 and 35 feet BGS. A summary of the soil analytical results for PCE is presented in Table 2.

Analytical Results - Arsenic and Lead. Low concentrations of arsenic (less than 25 mg/kg) and lead (less than 14 mg/kg) were detected in all the samples from EB-17 through EB-21. These low concentrations represent background levels in the soil and do not confirm the elevated arsenic and lead concentrations detected from boring EB-5 at 3 feet BGS. The elevated lead and arsenic concentrations is found in only one sample. Therefore, the horizontal and vertical extent of the elevated lead and arsenic has been defined. A summary of the arsenic and lead is presented in Table 2.

Analytical Results - Pesticides. The pesticide distribution is shown in Drawing 3. No samples were analyzed for pesticides during this site characterization; therefore, the data has not changed from that reported in *Environmental Site Assessment* report.

Revised Human Health Screening Evaluation

A HHSE was presented in *Environmental Site Assessment* report. This HHSE was based on chemical concentrations detected at the Site from assessment activities through December 1996. Because new analytical data was collected during this site characterization, the HHSE was revised.

The HHSE focuses on estimating the potential threat to public health posed by recognized environmental conditions at the Site. The purpose of the HHSE is to assist in assessing the need for and extent of site remediation to protect human health. The Preliminary Endangerment Assessment (PEA) guidance document provides conservative, non-site-specific estimates of exposure intended to be a health-conservative preliminary evaluation of potential risk and hazard.

As requested by the DTSC, additional soil samples were collected in February 1997 and analyzed tor PCE, arsenic, and lead during this site characterization. In the previous HHSE, the concentrations of PCE, arsenic, and lead did not exceed levels of risk considered unacceptable, as documented in *Environmental Site Assessment.* The concentrations of arsenic and lead from the February 1997 sampling do not exceed previous concentrations; therefore, arsenic and lead were not evaluated further in this revised HHSE. However, PCE was detected in the February 1997 sampling at concentrations greater than originally detected; therefore, the potential risk was reevaluated as discussed below.

Consistent with the previous HHSE, the potential risk and hazard of PCE were characterized assuming the same exposure pathways. The maximum detected concentrations were used in the HHSE to represent the highest potential exposure for possible residential receptors. Initially, the maximum PCE concentration of 0.31 mg/kg was found in sample EB-1 at 3.0 feet BGS. However, the February 1997 sampling detected a maximum soil concentration of 1.2 mg/kg from soil sample EB-11 at 3.5 feet BGS.

For ingestion and dermal contact with soil, the maximum detected concentration was used directly as the exposure concentration. The measured concentration was combined with intake assumptions provided in the PEA guidance document to quantify exposures via these pathways. Resulting daily doses for ingestion and dermal contact are shown on Tables 3 and 4. As discussed in the previous HHSE, the dust inhalation exposure pathway was not evaluated for volatiles, which includes PCE. For inhalation of volatile chemicals originating in soil, the detected concentrations in soil were input into a simple, infinite source model, following PEA guidance, to estimate air emission rates at the soil surface. Resulting air concentrations are shown on Table 5, along with intake assumptions and exposure equations provided in the PEA guidance manual. Resulting daily doses from inhalation of vapors are also shown on this table.

The revised potential risk associated with the results of PCE from the additional analyses was calculated using the toxicity values (for both carcinogenic and non-carcinogenic effects) and methods previously described in the initial HHSE. These results are summarized in Table 6. The cumulative PCE cancer risk changed from 7.44E-08 to 2.88E-07 based on the February 1997 sampling. The cumulative hazard index for a child went from 1.20E-03 to 4.65E-03. The total hazard index for an adult went from 2.88E-04 to 1.12E-03.

The revised risks associated with all the chemicals identified on the Site were essentially unchanged and are presented in Table 6. The total cancer risk of 1.40E-05 remained the same, even though the concentration of PCE detected in the soil increased. The hazard index for a child and an adult only increased by a factor of 1.02. The hazard index for a child went from 5.70E-01 to 5.80E-01. The hazard index for an adult went from 7.5E-02 to 7.6E-02. Consistent with the previous HHSE, potential exposure to PCE at the maximum detected concentration at the Site via soil ingestion, dermal contact with soil, and VOC inhalation does not exceed the acceptable level of cancer risk of 1.0E-06 or the non-cancer risk threshold level of 1.

CONCLUSIONS

The following conclusions were based on the field observations and data collected during the site characterization activities and the revised HHSE.

- The direction of groundwater flow is to the north-northwest at an approximate gradient of 0.002 foot per foot, similar to the flow direction and gradient presented in the *Environmental Site Assessment* report.

- Low concentrations of PCE are present in the soil underlying the former dry cleaning building. The PCE impact has been delineated vertically and did not exceed 30 feet BGS.

- The elevated arsenic and lead concentrations detected previously in boring EB-5 were not detected in adjacent boring EB-19 or in the surrounding borings. Based on these data, it appears the elevated arsenic and lead concentrations detected in EB-5 represents a very localized impact.

- Results of the revised HHSE indicate no significant risk to the public health from recognized environmental conditions at the Site. In particular, the increased levels of PCE detected in the area of the former dry cleaners, do not present a significant risk.

Please call if you have questions or need additional information.

Sincerely,

EMCON

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Attachments: Limitations
Table 1 - Groundwater Elevation Data
Table 2 - Summary of Soil Analytical Results
Table 3 - Estimation of Soil Ingestion Dose
Table 4 - Estimation of Dermal Dose
Table 5 - Estimation of Inhalation of Dust Dose
Table 6 - Risk Characterization Summary
Figure 1 - Groundwater Summary Map, 3/4/97
Drawing 1 - Analytical Results for Soil, Site Plan
Drawing 2 - Analytical Results for Soil, Former UST, Former Dry Cleaners, and Unpaved Areas
Drawing 3 - Analytical Results for Pesticides in Soil

Attachment A - Soil Boring Permit
Attachment B - Exploratory Boring Logs
Attachment C - Analytical Reports and Chain-of-Custody Documentation

LIMITATIONS

The services described in this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with our client. This report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, nor the use of segregated portions of this report.

Table 1

Groundwater Elevation Data
Federal Realty Investment Trust
2980-3030 Stevens Creek Boulevard, San Jose, California

Well Designation	Well Casing Elevation (ft/MSL)	Date Measured	Depth to Water (ft)	Water Level Elevation (ft/MSL)
MW-1	129.89	01/08/97	57.43	72.46
		02/28/97	48.23	81.66
		03/04/97	49.23	80.66
MW-2	132.70	01/08/97	58.71	73.99
		02/28/97	51.50	81.20
		03/04/97	51.16	81.54
MW-3	136.59	01/08/97	61.31	75.28
		02/28/97	53.29	83.30
		03/04/97	53.02	83.57

Notes:

1. Benchmark = City of San Jose #641-B, elevation of 129.50 MSL
2. MSL = mean sea level

Table 2

Summary of Soil Analytical Results
Federal Realty Investment Trust
2980-3030 Stevens Creek Boulevard, San Jose, California

Units: mg/kg

Borehole Designation	Sample Depth (ft.)	Date Sampled	PCE(1)	Arsenic	Lead
EB-11	3.5	02/05/97	1.2	NA(2)	NA
	8	02/05/97	0.14	NA	NA
	10	02/05/97	<0.05(3)	NA	NA
	15	02/05/97	0.28	NA	NA
	20	02/05/97	0.20	NA	NA
EB-12	3	02/05/97	0.18	NA	NA
	5	02/05/97	0.19	NA	NA
	10	02/05/97	0.23	NA	NA
	15	02/05/97	0.48	NA	NA
	20	02/05/97	0.43	NA	NA
EB-13	3	02/05/97	0.26	NA	NA
	5	02/05/97	0.27	NA	NA
	10	02/05/97	0.06	NA	NA
	15	02/05/97	0.16	NA	NA
	20	02/05/97	0.28	NA	NA
EB-14	3	02/05/97	0.12	NA	NA
	5	02/05/97	0.088	NA	NA
	10	02/05/97	<0.05	NA	NA
	15	02/05/97	0.066	NA	NA
	20	02/05/97	0.21	NA	NA
EB-15	3	02/05/97	0.13	NA	NA
	5	02/05/97	<0.05	NA	NA
	10	02/05/97	0.15	NA	NA
	15	02/05/97	0.094	NA	NA
	20	02/05/97	0.23	NA	NA
EB-16	3	02/06/97	0.42	NA	NA
	5	02/06/97	0.19	NA	NA
	10	02/06/97	0.16	NA	NA
	15	02/06/97	0.45	NA	NA
	20	02/06/97	0.52	NA	NA
EB-17	3	02/06/97	NA	5	8.5
	6	02/06/97	NA	6	8.0
	10	02/06/97	NA	6	9.4
EB-18	3	02/06/97	NA	7	8.5
	6	02/06/97	NA	6	8.8
	10	02/06/97	NA	6	7.7
EB-19	3	02/06/97	NA	5	8.3
	6	02/06/97	NA	6	8.0
	10	02/06/97	NA	5	8.6

Table 2

Summary of Soil Analytical Results
Federal Realty Investment Trust
2980-3030 Stevens Creek Boulevard, San Jose, California

Units: mg/kg

Borehole Designation	Sample Depth (ft.)	Date Sampled	PCE(1)	Arsenic	Lead
EB-20	3	02/06/97	NA	25	9.4
	6	02/06/97	NA	5	8.5
	10	02/06/97	NA	6	8.3
EB-21	3	02/06/97	NA	18	14
	6	02/06/97	NA	5	7.3
	10	02/06/97	NA	5	8.1
EB-22	10	02/28/97	0.056	NA	NA
	15	02/28/97	0.039	NA	NA
	20	02/28/97	0.030	NA	NA
	25	02/28/97	0.017	NA	NA
	30	02/28/97	0.0054	NA	NA
	35	02/28/97	<0.005	NA	NA
	40	02/28/97	<0.005	NA	NA
	45	02/28/97	<0.005	NA	NA

(1) PCE = Tetrachloroethene. All other VOCs by EPA method 8260 or 8010 below method reporting limits.

(2) NA = Not analyzed.

(3) < = Sample below detection limits stated.

Table 3

Estimation of Soil Ingestion Dose
Federal Realty Investment Trust
2980-3030 Stevens Creek Boulevard, San Jose, California

Parameter	Symbol	Units	Note	DDD	DDE	DDT	Chloropropham	Arsenic	Benzene	Ethylbenzene	Toluene	Xylenes	PCE
Soil Chemical Concentration	Cs	mg/kg		1.1	7.5	4.9	22	0.9	0.084	0.1	0.16	0.37	1.2
Exposure frequency	EF	day/year	1	350	350	350	350	350	350	350	350	350	350
Exposure duration - children	EDk	years	1	6	6	6	6	6	6	6	6	6	6
Exposure duration - adults	EDa	years	1	24	24	24	24	24	24	24	24	24	24
Soil ingestion rate - children	SIRk	mg/day	1	200	200	200	200	200	200	200	200	200	200
Soil ingestion rate - adults	SIRa	mg/day	1	100	100	100	100	100	100	100	100	100	100
Conversion factor	CF2	kg/mg	1	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06
Body weight - children	BWk	kg	1	15	15	15	15	15	15	15	15	15	15
Body weight - adults	BWa	kg	1	70	70	70	70	70	70	70	70	70	70
Averaging time (noncarcinogens) - children	ATnk	days	2	2190	2190	2190	2190	2190	2190	2190	2190	2190	2190
Averaging time (noncarcinogens) - adults	ATna	days	3	8760	8760	8760	8760	8760	8760	8760	8760	8760	8760
Averaging time (carcinogens)	ATc	days	4	25550	25550	25550	25550	25550	25550	25550	25550	25550	25550
Daily Dose - Cancer - Children	LADDk	mg/kg/day	5	1.21E-06	8.22E-06	5.37E-06	2.41E-05	9.86E-07	9.21E-08	1.10E-07	1.75E-07	4.05E-07	1.32E-06
Daily Dose - Cancer - Adults	LADDa	mg/kg/day	6	5.17E-07	3.52E-06	2.30E-06	1.03E-05	4.23E-07	3.95E-08	4.70E-08	7.51E-08	1.74E-07	5.64E-07
Daily Dose - Cancer - Child/Adult	LADDka	mg/kg/day	7	1.72E-06	1.17E-05	7.67E-06	3.44E-05	1.41E-06	1.32E-07	1.57E-07	2.50E-07	5.79E-07	1.88E-06
Slope Factor	SF	$(mg/kg/day)^{-1}$	8	0.24	0.34	0.34	NA	1.5	0.1	NA	NA	NA	0.051
Cancer Risk - Child/Adult	CR	Unitless	9	4.13E-07	3.99E-06	2.61E-06	NA	2.11E-06	1.32E-08	NA	NA	NA	9.58E-08
Daily Dose - Noncancer - Children	ADDk	mg/kg/day	10	1.41E-05	9.59E-05	6.26E-05	2.81E-04	1.15E-05	1.07E-06	1.28E-06	2.05E-06	4.73E-06	1.53E-05
Daily Dose - Noncancer - Adults	ADDa	mg/kg/day	11	1.51E-06	1.03E-05	6.71E-06	3.01E-05	1.23E-06	1.15E-07	1.37E-07	2.19E-07	5.07E-07	1.64E-06
Reference Dose	RfD	mg/kg/day	12	5.00E-04	5.00E-04	5.00E-04	2.00E-01	3.00E-04	NA	1.00E-01	2.00E-01	2.00E+00	1.00E-02
Hazard Quotient - Children	HQk	Unitless	13	2.81E-02	1.92E-01	1.25E-01	1.41E-03	3.84E-02	NA	1.28E-05	1.02E-05	2.37E-06	1.53E-03
Hazard Quotient - Adults	HQa	Unitless	14	3.01E-03	2.05E-02	1.34E-02	1.51E-04	4.11E-03	NA	1.37E-06	1.10E-06	2.53E-07	1.64E-04

[1] From: California (1994)

[2] EDk * 365 days/yr

[3] EDa * 365 days/yr

[4] 70-year lifetime * 365 days/yr

[5] (Cs * SIRk * CF2 * EF * EDk)/(BWk * ATc)

[6] (Cs * SIRa * CF2 * EF * EDa)/(BWa * ATc)

[7] LADDk + LADDa

[8] Slope factors from OEHHA (1994)

[9] CR = LADDka * SF

[10] (Cs * EF * EDk * SIRk * CF2/BWk * ATnk)

[11] (Cs * EF * EDa * SIRa * CF2/BWa * ATna)

[12] Chronic reference dose for DDT from USEPA (1996). Toxicity of DDD and DDE assumed to be equal to that for DDT.

[13] ADDk/RfD

[14] ADDa/RfD

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Table 4

Estimation of Dermal Dose
Federal Realty Investment Trust
2980-3030 Stevens Creek Boulevard, San Jose, California

Parameter	Symbol	Units	Note	DDD	DDE	DDT	Chloropropham	Arsenic	Benzene	Ethylbenzene	Toluene	Xylenes	PCE
Soil Chemical Concentration	Cs	mg/kg		1.1	7.5	4.9	22	0.9	0.084	0.1	0.16	0.37	1.2
Dermal Absorption Factor	DAF	Unitless	1	0.05	0.05	0.05	0.25	0.03	0.1	0.1	0.1	0.1	0.1
Soil Adherence Factor	SAF	mg/cm^2-day	1	1	1	1	1	1	1	1	1	1	1
Exposed Skin Area - Children	ESk	cm^2	1	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
Exposed Skin Area - Adults	ESa	cm^2	1	5800	5800	5800	5800	5800	5800	5800	5800	5800	5800
Unit Conversion Factor	CF1	kg/mg		1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06
Body Weight - Children	BWk	kg	1	15	15	15	15	15	15	15	15	15	15
Body Weight - Adults	BWa	kg	1	70	70	70	70	70	70	70	70	70	70
Exposure Frequency - Children	EFk	days/yr	1	350	350	350	350	350	350	350	350	350	350
Exposure Frequency - Adults	EFa	days/yr	1	100	100	100	100	100	100	100	100	100	100
Exposure Duration - Children	EDk	yr	1	6	6	6	6	6	6	6	6	6	6
Exposure Duration - Adults	EDa	yr	1	24	24	24	24	24	24	24	24	24	24
Year Length	Y	day/yr	1	365	365	365	365	365	365	365	365	365	365
Lifetime	LT	years	1	70	70	70	70	70	70	70	70	70	70
Daily Dose - Cancer - Children	LADDk	mg/kg/day	2	6.03E-07	4.11E-06	2.68E-06	6.03E-05	2.96E-07	9.21E-08	1.10E-07	1.75E-07	4.05E-07	1.32E-06
Daily Dose - Cancer - Adults	LADDa	mg/kg/day	3	4.28E-07	2.92E-06	1.91E-06	4.28E-05	2.10E-07	6.54E-08	7.78E-08	1.25E-07	2.88E-07	9.34E-07
Daily Dose - Cancer - Child/Adult	LADDka	mg/kg/day	4	1.03E-06	7.03E-06	4.59E-06	1.03E-04	5.06E-07	1.57E-07	1.87E-07	3.00E-07	6.93E-07	2.25E-06
Slope Factor	SF	$(mg/kg/day)^{-1}$	5	0.24	0.34	0.34	NA	1.5	0.1	NA	NA	NA	0.051
Cancer Risk - Child/Adult	CR	Unitless	6	2.47E-07	2.39E-06	1.56E-06	NA	7.59E-07	1.57E-08	NA	NA	NA	1.15E-07
Daily Dose - Noncancer - Children	ADDk	mg/kg/day	7	7.03E-06	4.79E-05	3.13E-05	7.03E-04	3.45E-06	1.07E-06	1.28E-06	2.05E-06	4.73E-06	1.53E-05
Daily Dose - Noncancer - Adults	ADDa	mg/kg/day	8	1.25E-06	8.51E-06	5.56E-06	1.25E-04	6.13E-07	1.91E-07	2.27E-07	3.63E-07	8.40E-07	2.72E-06
Reference Dose	RfD	mg/kg/day	9	5.00E-04	5.00E-04	5.00E-04	2.00E-01	3.00E-04	NA	1.00E-01	2.00E-01	2.00E+00	1.00E-02
Hazard Quotient - Children	HQk	Unitless	10	1.41E-02	9.59E-02	6.26E-02	3.52E-03	1.15E-02	NA	1.28E-05	1.02E-05	2.37E-06	1.53E-03
Hazard Quotient - Adults	HQa	Unitless	11	2.50E-03	1.70E-02	1.11E-02	6.24E-04	2.04E-03	NA	2.27E-06	1.82E-06	4.20E-07	2.72E-04

[1] From: California (1994)

[2] (DAF * Cs * SAF * CF1 * ESk * EFk * EDk)/(BWk * LT * Y)

[3] (DAF * Cs * SAF * CF1 * ESa * EFa * EDa)/(BWa * LT * Y)

[4] LADDk + LADDa

[5] Slope factors from OEHHA (1994)

[6] CR = LADDka * SF

[7] (DAF * Cs * SAF * CF1 * ESk * EFk * EDk)/(BWk * EDk * Y)

[8] (DAF * Cs * SAF * CF1 * ESa * EFa * EDa)/(BWa * EDa * Y)

[9] Chronic reference dose for DDT from USEPA (1996). Toxicity of DDD and DDE assumed to be equal to that for DDT.

[10] ADDk/RfD

[11] ADDa/RfD

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Table 5

Estimation of Volatile Inhalation Dose
Federal Realty Investment Trust
2980-3030 Stevens Creek Boulevard, San Jose, California

Parameter	Symbol	Units	Note	Benzene	Ethylbenzene	Toluene	Xylenes	PCE
Air diffusion coefficient	Di	cm2/sec	1	0.088	0.075	0.078	0.087	0.072
Henry's Law constant	Hc	atm-m3/mol	1	5.43E-03	8.44E-03	5.94E-03	5.30E-03	1.49E-02
Organic soil-water partition coefficient	Koc	L/kg	1	65	220	257	240	661
Fraction of organic carbon in soil	foc	Unitless	1	0.02	0.02	0.02	0.02	0.02
Soil chemical concentration	Ci	mg/kg		0.084	0.1	0.16	0.37	1.2
VOC emission rate numerator	Ei1	NA	1	4.94E-06	2.30E-06	2.31E-06	5.69E-06	1.56E-05
VOC emission rate denominator	Ei2	NA	1	1.34E-02	8.43E-03	6.69E-03	6.91E-03	6.35E-03
Total VOC emission rate	Ei	mg/sec	14	3.69E-04	2.73E-04	3.45E-04	8.23E-04	2.45E-03
Box model default divisor	BM	unitless	1	99	99	99	99	99
Conversion factor	CF2	kg/mg	1	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06
Air concentration	Ca	mg/m^3	15	3.73E-06	2.76E-06	3.48E-06	8.32E-06	2.48E-05
Exposure frequency	EF	day/year	1	350	350	350	350	350
Exposure duration - children	EDk	years	1	6	6	6	6	6
Exposure duration - adults	EDa	years	1	24	24	24	24	24
Inhalation rate - children	IRk	m^3/day	1	10	10	10	10	10
Inhalation rate - adults	IRa	m^3/day	1	20	20	20	20	20
Body weight - children	BWk	kg	1	15	15	15	15	15
Body weight - adults	BWa	kg	1	70	70	70	70	70
Averaging time (noncarcinogens) - children	ATnk	days	2	2190	2190	2190	2190	2190
Averaging time (noncarcinogens) - adults	ATna	days	3	8760	8760	8760	8760	8760
Averaging time (carcinogens)	ATc	days	1	25550	25550	25550	25550	25550
Daily Dose - Cancer - Children	LADDk	mg/kg/day	4	2.04E-07	1.51E-07	1.91E-07	4.56E-07	1.36E-06
Daily Dose - Cancer - Adults	LADDa	mg/kg/day	5	3.50E-07	2.59E-07	3.27E-07	7.81E-07	2.33E-06
Daily Dose - Cancer - Child/Adult	LADDka	mg/kg/day	6	5.54E-07	4.10E-07	5.18E-07	1.24E-06	3.69E-06
Slope Factor	SF	$(mg/kg/day)^{-1}$	7	0.1	NA	NA	NA	0.021
Cancer Risk - Child/Adult	CR	Unitless	8	5.54E-08	NA	NA	NA	7.74E-08
Daily Dose - Noncancer - Children	ADDk	mg/kg/day	9	2.38E-06	1.76E-06	2.23E-06	5.32E-06	1.58E-05
Daily Dose - Noncancer - Adults	ADDa	mg/kg/day	10	1.02E-06	7.56E-07	9.55E-07	2.28E-06	6.79E-06
Reference Dose	RfD	mg/kg/day	11	NA	2.90E-01	1.10E-01	2.00E-01	1.00E-02
Hazard Quotient - Children	HQk	Unitless	12	NA	6.08E-06	2.02E-05	2.66E-05	1.58E-03
Hazard Quotient - Adults	HQa	Unitless	13	NA	2.61E-06	8.68E-06	1.14E-05	6.79E-04

[1] From: California (1994)
[2] EDk * 365 days/yr
[3] EDa * 365 days/yr
[4] (Ca * IRk * EF * EDk) /(BWk * ATc)
[5] (Ca * IRa * EF * EDa)/(BWa * ATc)
[6] LADDk + LADDa
[7] Slope factors from OEHHA (1994)
[8] CR = LADDka * SF
[9] (Ca * IRk * EF * EDk)/(BWk * ATnk)
[10] (Ca * IRa * EF * EDa)/(BWa * ATna)
[11] Chronic reference dose for DDT from USEPA (1996). Toxicity of DDD and DDE assumed to be equal to that for DDT.
[12] ADDk/RfD
[13] ADDa/RfD
[14] Ei = Ei1/Ei2 (California, 1994)
[15] Ca = Ei/BM (California, 1994)

Table 6

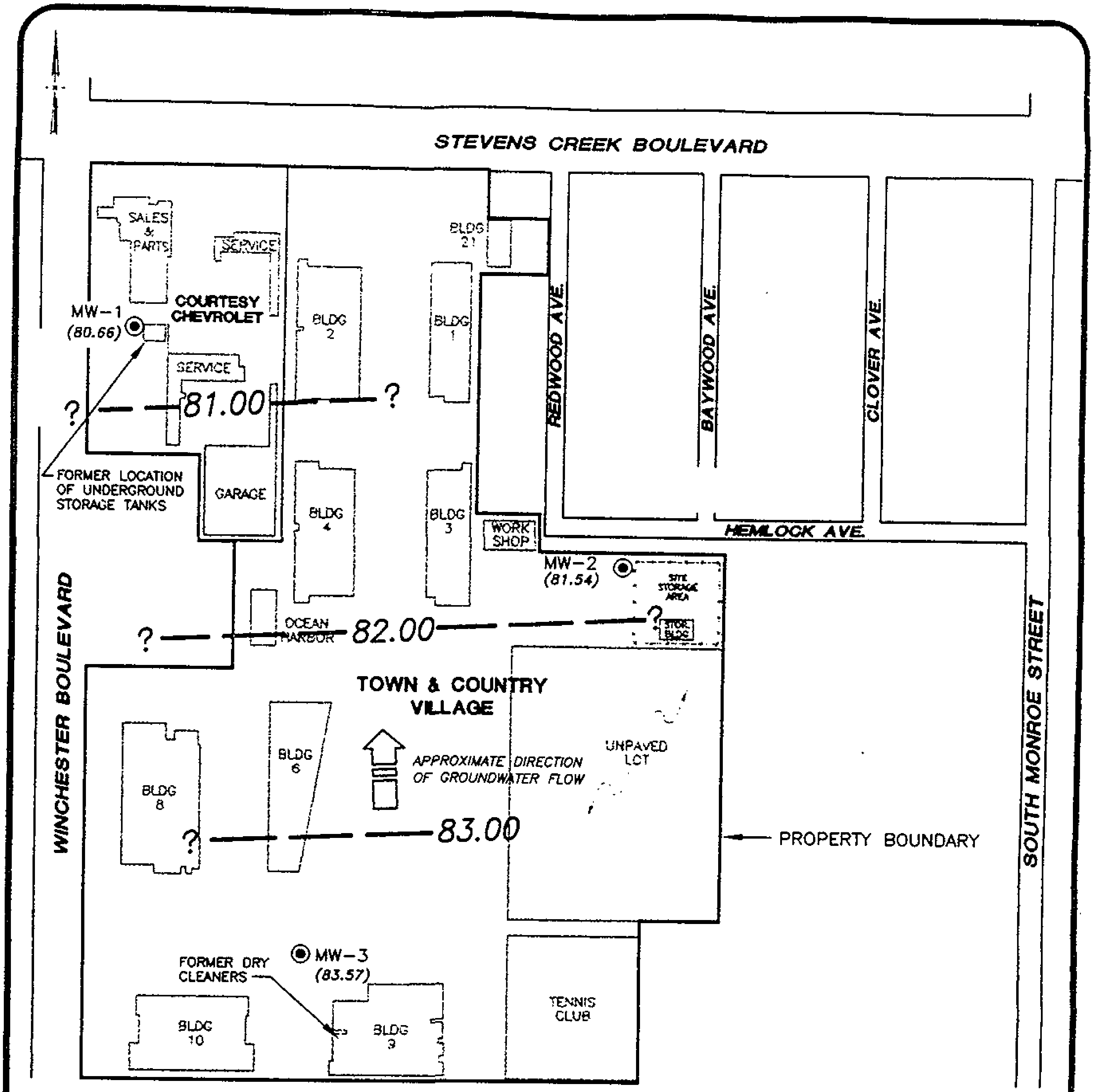
Risk Characterization Summary
Federal Realty Investment Trust
2980-3030 Stevens Creek Boulevard, San Jose, California

Pathway	Cancer Risk	Hazard Index/Child	Hazard Index/Adult
Soil Ingestion			
DDD	4.13E-07	2.81E-02	3.01E-03
DDE	**3.99E-06**	1.92E-01	2.05E-02
DDT	**2.61E-06**	1.25E-01	1.34E-02
Chloropropham	NA	1.41E-03	1.51E-04
Arsenic	**2.11E-06**	3.84E-02	4.11E-03
Benzene	1.32E-08	NA	NA
Ethylbenzene	NA	1.28E-05	1.37E-06
Toluene	NA	1.02E-05	1.10E-06
Xylenes	NA	2.37E-06	2.53E-07
PCE	9.58E-08	1.53E-03	1.64E-04
Total	**9.1E-06**	**3.8E-01**	**4.1E-02**
Dermal Contact			
DDD	2.47E-07	1.41E-02	2.50E-03
DDE	**2.39E-06**	9.59E-02	1.70E-02
DDT	**1.56E-06**	6.26E-02	1.11E-02
Chloropropham	NA	3.52E-03	6.24E-04
Arsenic	7.59E-07	1.15E-02	2.04E-03
Benzene	1.57E-08	NA	NA
Ethylbenzene	NA	1.28E-05	2.27E-06
Toluene	NA	1.02E-05	1.82E-06
Xylenes	NA	2.37E-06	4.20E-07
PCE	1.15E-07	1.53E-03	2.72E-04
Total	**5.0E-06**	**1.9E-01**	**3.3E-02**
Dust Inhalation			
DDD	1.96E-09	7.03E-05	3.01E-05
DDE	1.90E-08	4.79E-04	2.05E-04
DDT	1.24E-08	3.13E-04	1.34E-04
Chloropropham	NA	3.52E-06	1.51E-06
Arsenic	1.00E-07	9.59E-05	4.11E-05
Total	**5.1E-06**	**9.6E-04**	**4.1E-04**
VOC Inhalation			
Benzene	5.54E-08	NA	NA
Toluene	NA	6.08E-06	2.61E-06
Ethylbenzene	NA	2.02E-05	8.68E-06
Xylenes	NA	2.66E-05	1.14E-05
PCE	7.74E-08	1.58E-03	6.79E-04
Total	**1.3E-07**	**1.6E-03**	**7.0E-04**
Cumulative Totals			
DDD	6.63E-07	4.23E-02	5.54E-03
DDE	**6.40E-06**	2.88E-01	3.78E-02
DDT	**4.18E-06**	1.88E-01	2.47E-02
Chloropropham	NA	4.93E-03	7.76E-04
Arsenic	**2.97E-06**	5.00E-02	6.19E-03
Benzene	8.43E-08	NA	NA
Ethylbenzene	NA	4.58E-05	1.23E-05
Toluene	NA	2.65E-05	5.52E-06
Xylenes	NA	3.13E-05	1.21E-05
PCE	2.88E-07	4.65E-03	1.12E-03
Total	**1.4E-05**	**5.8E-01**	**7.6E-02**

Shading indicates risk exceeds 1E-06 value

* Please refer to Table 7 included in *Environmental Site Assessment, Town and Country* Village Shopping Center, San Jose, California (EMCON January 1997) for resulting daily doses from dust inhalation exposure.

97-036



EXPLANATION

◉ MONITORING WELL

(83.57) GROUNDWATER ELEVATION (FT.-MSL); MEASURED 3/4/97

?— — GROUNDWATER ELEVATION CONTOUR (FT.-MSL)

0 300 600
SCALE IN FEET

EMCON

DATE MAR. 1997
DWN KAJ
APP
REV 0
PROJECT NO.
2152-001.001

FIGURE 1
FEDERAL REALTY INVESTMENT TRUST
TOWN & COUNTRY VILLAGE
STEVENS CREEK BLVD. - SAN JOSE, CA
GROUNDWATER ELEVATION CONTOURS

EA-SANJOSE-CAD/DRAWINGS: I:\2152001\GWSUM.dwg Xrefs: <NONE>
Scale: 1 = 300.00 DimScale: 1 = 300.00 Date: 3/9/97 Time: 5:50 PM Operator: KAJ

97-036

Feb-24-97 10:32A

P.02

Santa Clara Valley Water District

APPLICATION TO DRILL EXPLORATORY BORINGS

22152 - 001.00

FC 285 (08-07-96)

5750 Almaden Expressway, San Jose, CA 95118 (408) 265-2600

Page 1 of 2

Date Issued: 2-20-97	Expiration Date: 9-20-97	District Permit Number: 97E00022
Property Owner: FEDERAL REALTY INVESTMENT TRUST	Client (if different): NA	Name of Business/Residence at Site: TOWN & COUNTRY SHOPPING CENTER
Property Owner's Address: 1626 E. JEFFERSON ST.	Client's Address:	Address of Site: 2980 STEVENS CREEK BLVD
City, State, Zip: ROCKVILLE, MARYLAND	City, State, Zip:	City, State, Zip: SAN JOSE CA
Telephone No: 310 - 998 - 8100	Telephone No:	Assessor's Parcel Number of Site: Book: 277 Page: 33 Parcel: 005

Consulting Company Name: EMCON	Drilling Company Name: HOLGUIN, FAHAN & ASSOC, INC.	
Address: 1921 RINGWOOD AVE.	Address: 16570 ASTON ST.	
City, State, Zip: SAN JOSE CA 95131-1721	City, State, Zip: IRVINE, CA 92606	
Telephone No: 408-453-7300	Telephone: 888-432-2781	C-57/C-61 License No: 682362

In space at right sketch location of proposed boring(s) in sufficient detail to identify location. In addition to distances to nearest street and intersection, show distances to any existing structures, landmarks or topographic features.

How many borings will be installed on parcel? 1 TO 3

Proposed depth of boring(s):

☒ 45 to 150 feet

☐ 151 to 300 feet

☐ Over 300 feet

NO PERMIT IS REQUIRED FOR BORINGSS UNDER 45 FEET

Type of boring(s):

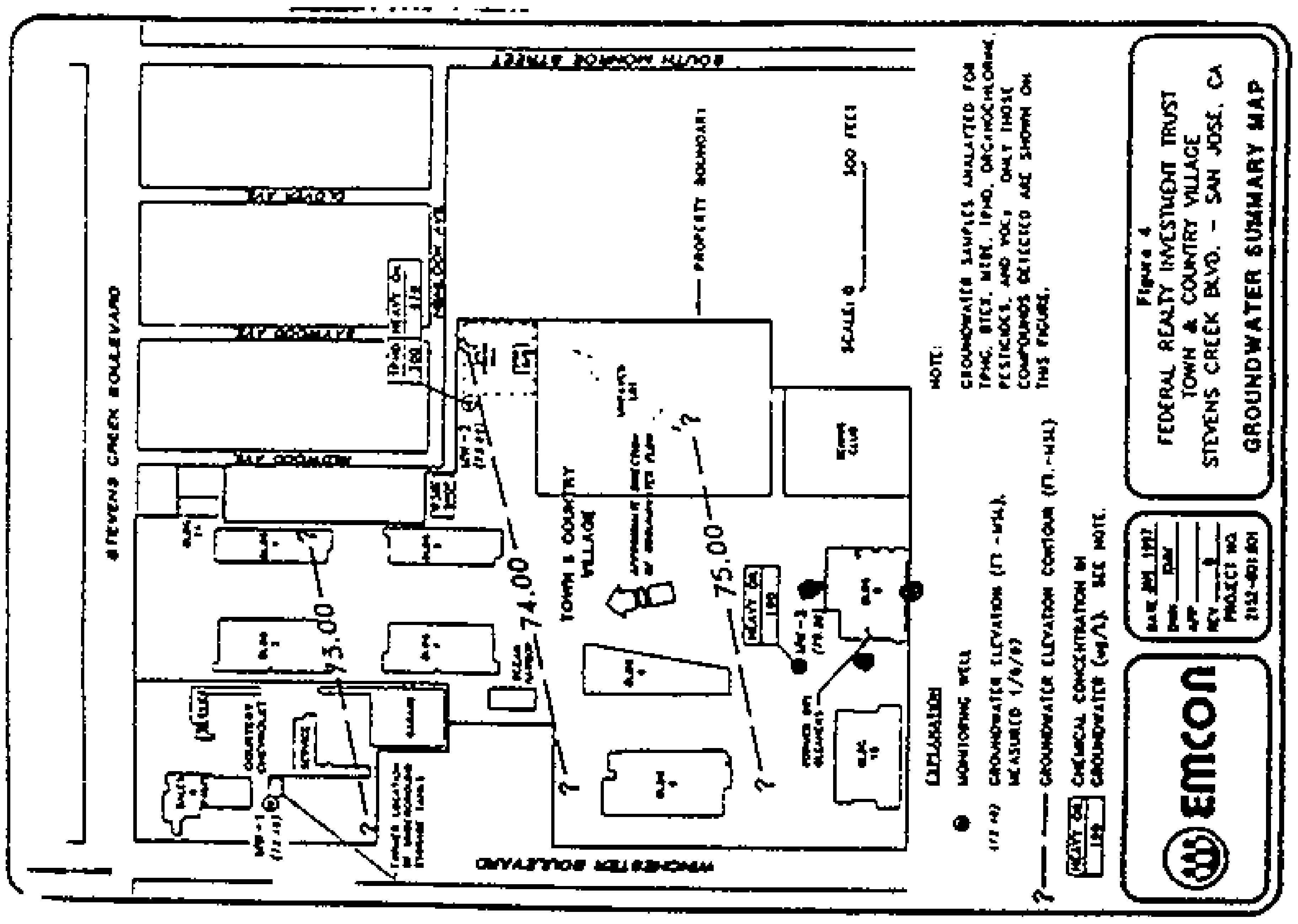
☐ Hollow stem

☐ Rotary

☒ CPT/Hydropunch

☐ Other: ____________

SITE PLAN - PLEASE DRAW ACCURATELY



● PROPOSED BORINGS

I understand that all work is to be done in accordance with S.C.V.W.D. Ordinance 90-1, "The Standards for the Construction and Reconstruction of Wells and Other Deep Excavations in Santa Clara County," and the conditions of this permit. I also certify that the information given above is correct to the best of my knowledge.

Signature of Property Owner/Agent: AGENT FOR FEDERAL REALTY INVESTMENT (EMCON)	Print/Type Name: TRUST PETE CHRISTIANSON	Date: 2/24/97
Signature of Client/Agent:	Print/Type Name:	Date
Signature of Driller/Agent: AGENT FOR FEDERAL REALTY INVESTMENT (EMCON)	Print/Type Name: TRUST PETE CHRISTIANSON	Date 2/24/97
Signature of Consultant: Mark Smolley	Print/Type Name: Mark Smolley R.G. 4650	Date 2/24/97

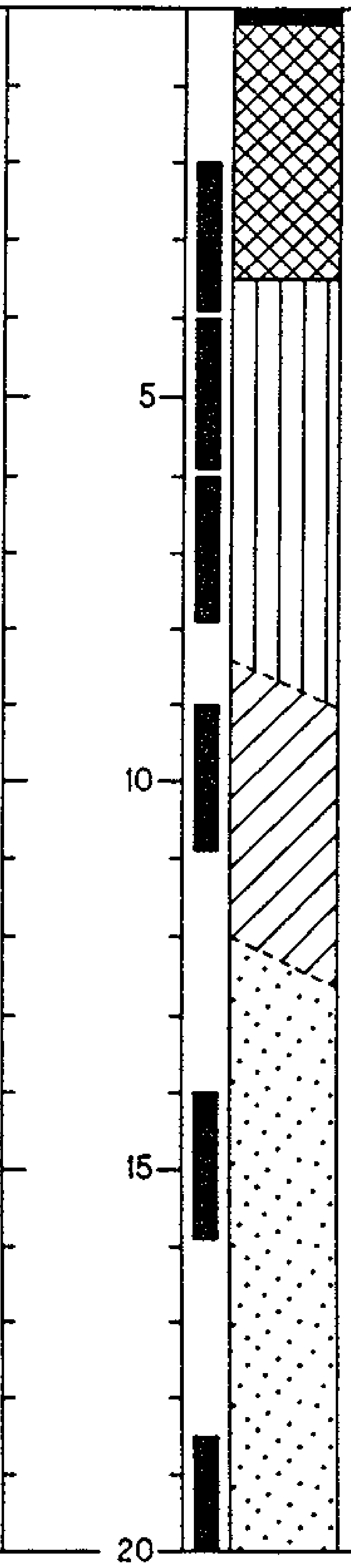
IMPORTANT: A minimum 24-hour notice must be given to SCVWD Well Inspection Dept. prior to installing the annular seal. Call (408) 265-2607, Ext. 2660. For weekends, holidays, and after hours call (408) 395-8121.

97-036

LOG OF EXPLORATORY BORING

PROJECT NUMBER: **22152-001.001**
BORING NO.: **EB-11**
PROJECT NAME: **Federal Realty Investment Trust**
PAGE: **1 of 2**
BY: **P. Christianson**
DATE: **2/5/97**
SURFACE ELEVATION: **NA**

RECOVERY (ft/ft)	PID (ppm)	PENETRATION (blws/6")	GROUND WATER LEVELS
0.8/2.0	1.5		
0.0/2.0			
1.0/2.0	2.6		
2.0/2.0	2.5		
1.0/2.0	3.3		
1.0/2.0	2.6		



DESCRIPTION

CONCRETE

FILL, SAND.

SANDY SILT (ML), very dark gray (10YR, 3/1); 60% low-plasticity fines; 30% fine to coarse sand, (F:M:C=3:2:1); 10 % fine gravel; soft; moist.

SANDY CLAY (CL), dark yellowish brown (10YR, 3/4); 70% non-plastic fines; 30% fine sand; soft; moist.

GRAVELLY SAND (SW), dark yellowish brown (10YR, 4/6); 5% non-plastic fines; 55% fine to coarse sand, (F:M:C=2:1:1); 40% fine to coarse gravel; damp.

WELL DETAIL

REMARKS
Borings drilled with a direct push technology (geoprobe) drilling rig using 1.5-inch diameter steel rods and sampler. Borings backfilled to surface using portland cement.

EMCON

97-036

LOG OF EXPLORATORY BORING

PROJECT NUMBER: **22152-001.001**
BORING NO.: **EB-11**
PROJECT NAME: **Federal Realty Investment Trust**
PAGE: **2 of 2**
BY: **P. Christianson**
DATE: **2/5/97**
SURFACE ELEVATION: **NA**

RECOVERY (ft/ft)	PID (ppm)	PENETRATION (blws/6")	GROUND WATER LEVELS	DEPTH IN FEET	SAMPLES	LITHOGRAPHIC COLUMN	DESCRIPTION	WELL DETAIL
					■	∴	GRAVELLY SAND (SW), continued.	▨
							BORING TERMINATED AT 20.5 FEET (Drilled to 18.5 feet, sampled to 20.5 feet).	
				25				
				30				
				35				
				40				

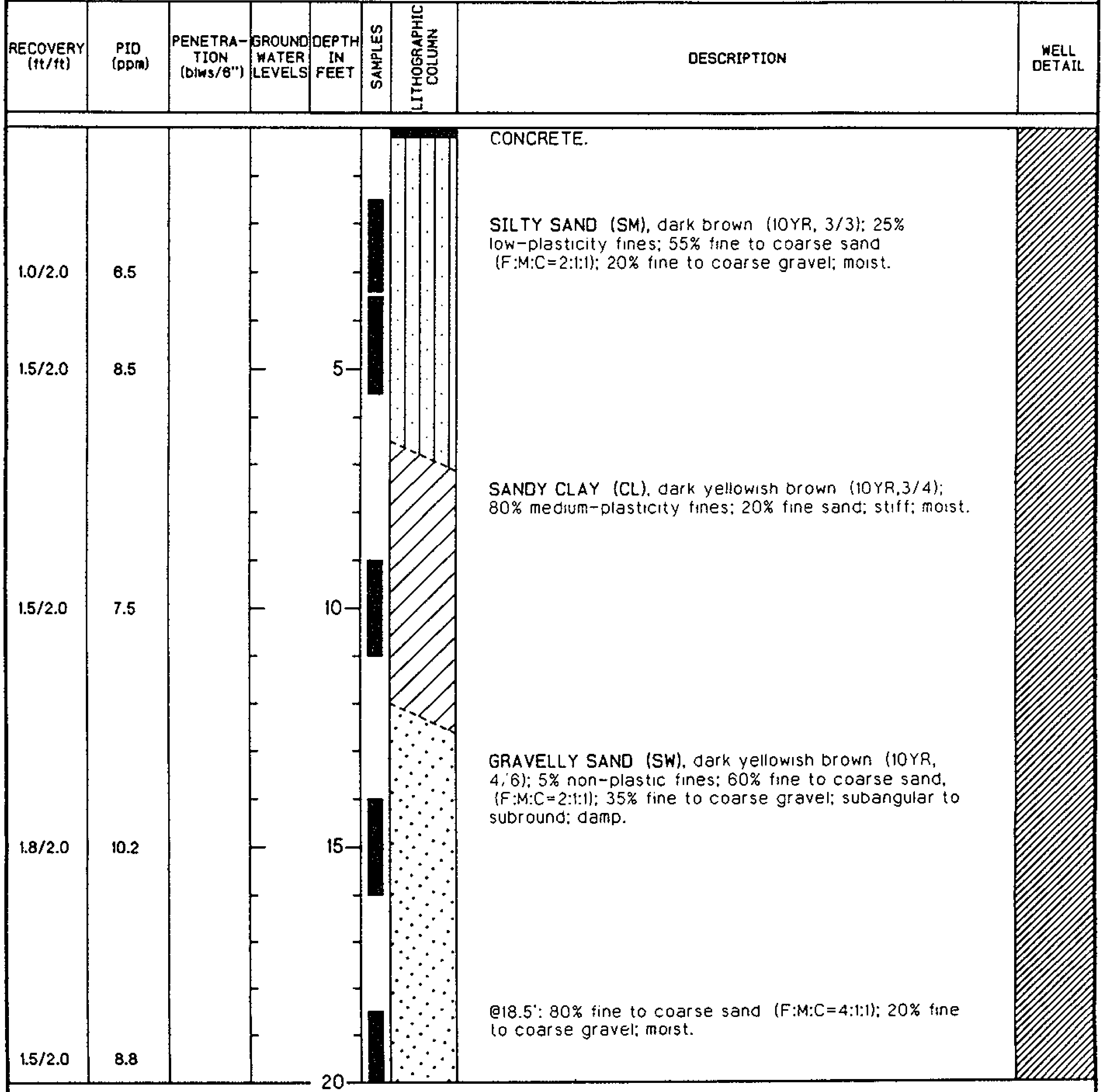
REMARKS
Borings drilled with a direct push technology (geoprobe) drilling rig using 1.5-inch diameter steel rods and sampler. Borings backfilled to surface using portland cement.

EMCON

97-036

LOG OF EXPLORATORY BORING

PROJECT NUMBER: **22152-001.001**
BORING NO.: **EB-12**
PROJECT NAME: **Federal Realty Investment Trust**
PAGE: **1 of 2**
BY: **P. Christianson**
DATE: **2/5/97**
SURFACE ELEVATION: **NA**



RECOVERY (ft/ft)	PID (ppm)	DEPTH IN FEET
1.0/2.0	6.5	
1.5/2.0	8.5	5
1.5/2.0	7.5	10
1.8/2.0	10.2	15
1.5/2.0	8.8	20

DESCRIPTION

CONCRETE.

SILTY SAND (SM), dark brown (10YR, 3/3); 25% low-plasticity fines; 55% fine to coarse sand (F:M:C=2:1:1); 20% fine to coarse gravel; moist.

SANDY CLAY (CL), dark yellowish brown (10YR,3/4); 80% medium-plasticity fines; 20% fine sand; stiff; moist.

GRAVELLY SAND (SW), dark yellowish brown (10YR, 4/6); 5% non-plastic fines; 60% fine to coarse sand, (F:M:C=2:1:1); 35% fine to coarse gravel; subangular to subround; damp.

@18.5': 80% fine to coarse sand (F:M:C=4:1:1); 20% fine to coarse gravel; moist.

REMARKS

Borings drilled with a direct push technology (geoprobe) drilling rig using 1.5-inch diameter steel rods and sampler. Borings backfilled to surface using portland cement.

EMCON

97-036

LOG OF EXPLORATORY BORING

PROJECT NUMBER: **22152-001.001**
BORING NO.: **EB-12**
PROJECT NAME: **Federal Realty Investment Trust**
PAGE: **2 of 2**
BY: **P. Christianson**
DATE: **2/5/97**
SURFACE ELEVATION: **NA**

RECOVERY (ft/ft)	PID (ppm)	PENETRATION (blws/6")	GROUND WATER LEVELS	DEPTH IN FEET	SAMPLES	LITHOGRAPHIC COLUMN	DESCRIPTION	WELL DETAIL
					■	∴	GRAVELLY SAND (SW), continued BORING TERMINATED AT 20.5 FEET (Drilled to 18.5 feet, sampled to 20.5 feet).	▨
				25				
				30				
				35				
				40				

REMARKS
Borings drilled with a direct push technology (geoprobe) drilling rig using 1.5-inch diameter steel rods and sampler. Borings backfilled to surface using portland cement.

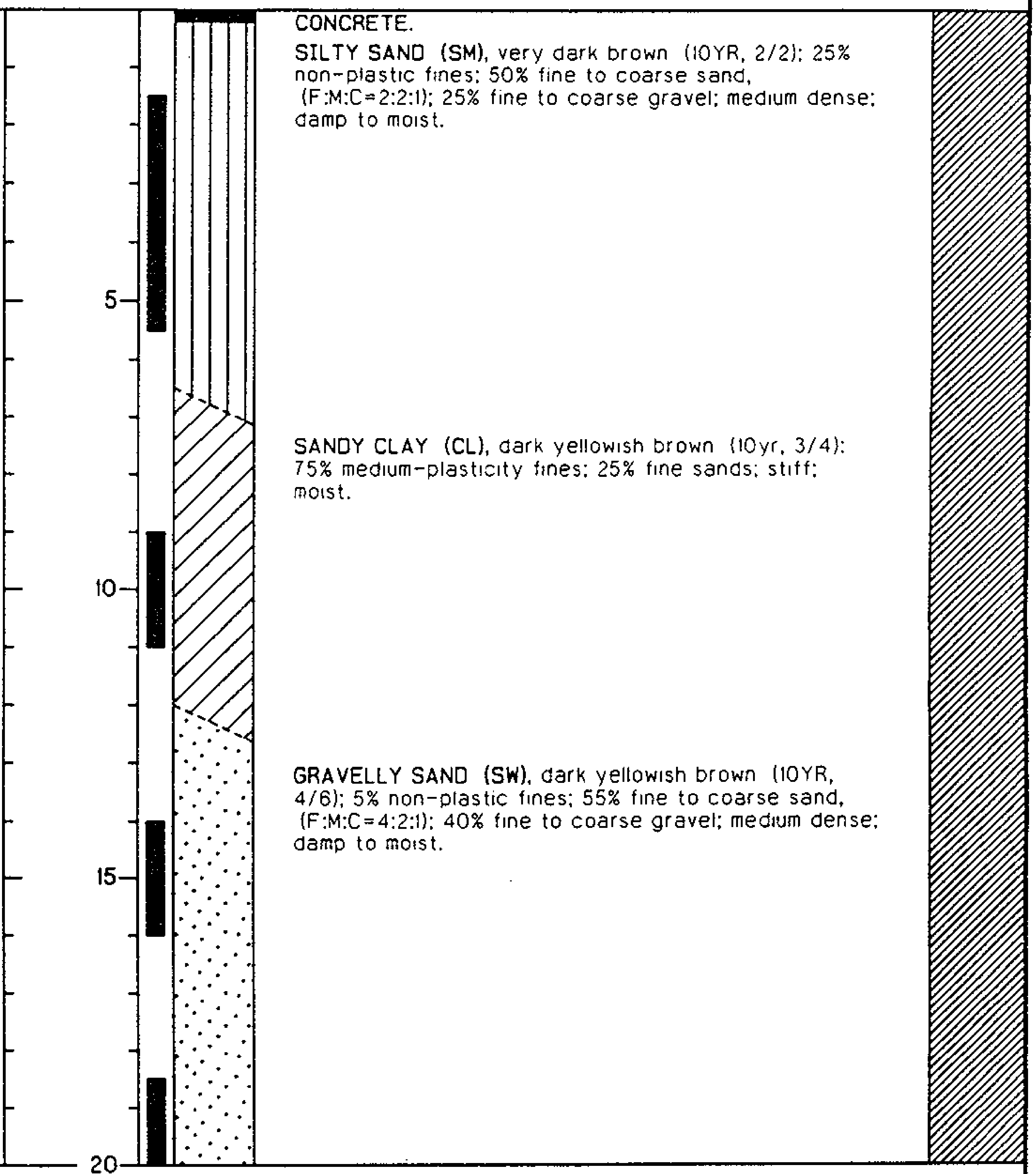
EMCON

97-036

LOG OF EXPLORATORY BORING

PROJECT NUMBER: **22152-001.001**
PROJECT NAME: **Federal Realty Investment Trust**
BY: **P. Christianson**
DATE: **2/5/97**
BORING NO.: **EB-13**
PAGE: **1 of 2**
SURFACE ELEVATION: **NA**

RECOVERY (ft/ft)	PID (ppm)	PENETRATION (blws/6")	GROUND WATER LEVELS	DEPTH IN FEET
1.9/2.0	10.8			
1.7/2.0	12.8			5
1.5/2.0	12.5			10
1.8/2.0	13.5			15
1.5/2.0	13.3			20



DESCRIPTION

CONCRETE.

SILTY SAND (SM), very dark brown (10YR, 2/2); 25% non-plastic fines; 50% fine to coarse sand, (F:M:C=2:2:1); 25% fine to coarse gravel; medium dense; damp to moist.

SANDY CLAY (CL), dark yellowish brown (10yr, 3/4); 75% medium-plasticity fines; 25% fine sands; stiff; moist.

GRAVELLY SAND (SW), dark yellowish brown (10YR, 4/6); 5% non-plastic fines; 55% fine to coarse sand, (F:M:C=4:2:1); 40% fine to coarse gravel; medium dense; damp to moist.

REMARKS

Borings drilled with a direct push technology (geoprobe) drilling rig using 1.5-inch diameter steel rods and sampler. Borings backfilled to surface using portland cement.

EMCON

97-036

LOG OF EXPLORATORY BORING

PROJECT NUMBER: **22152-001.001**
BORING NO.: **EB-13**
PROJECT NAME: **Federal Realty Investment Trust**
PAGE: **2 of 2**
BY: **P. Christianson**
DATE: **2/5/97**
SURFACE ELEVATION: **NA**

RECOVERY (ft/ft)	PID (ppm)	PENETRATION (blws/6")	GROUND WATER LEVELS	DEPTH IN FEET	SAMPLES	LITHOGRAPHIC COLUMN	DESCRIPTION	WELL DETAIL
					■	⁘	GRAVELLY SAND (SW), continued. BORING TERMINATED AT 20.5 FEET (Drilled to 18.5 feet, sampled to 20.5 feet).	▨
				25				
				30				
				35				
				40				

REMARKS
Borings drilled with a direct push technology (geoprobe) drilling rig using 1.5-inch diameter steel rods and sampler. Borings backfilled to surface using portland cement.

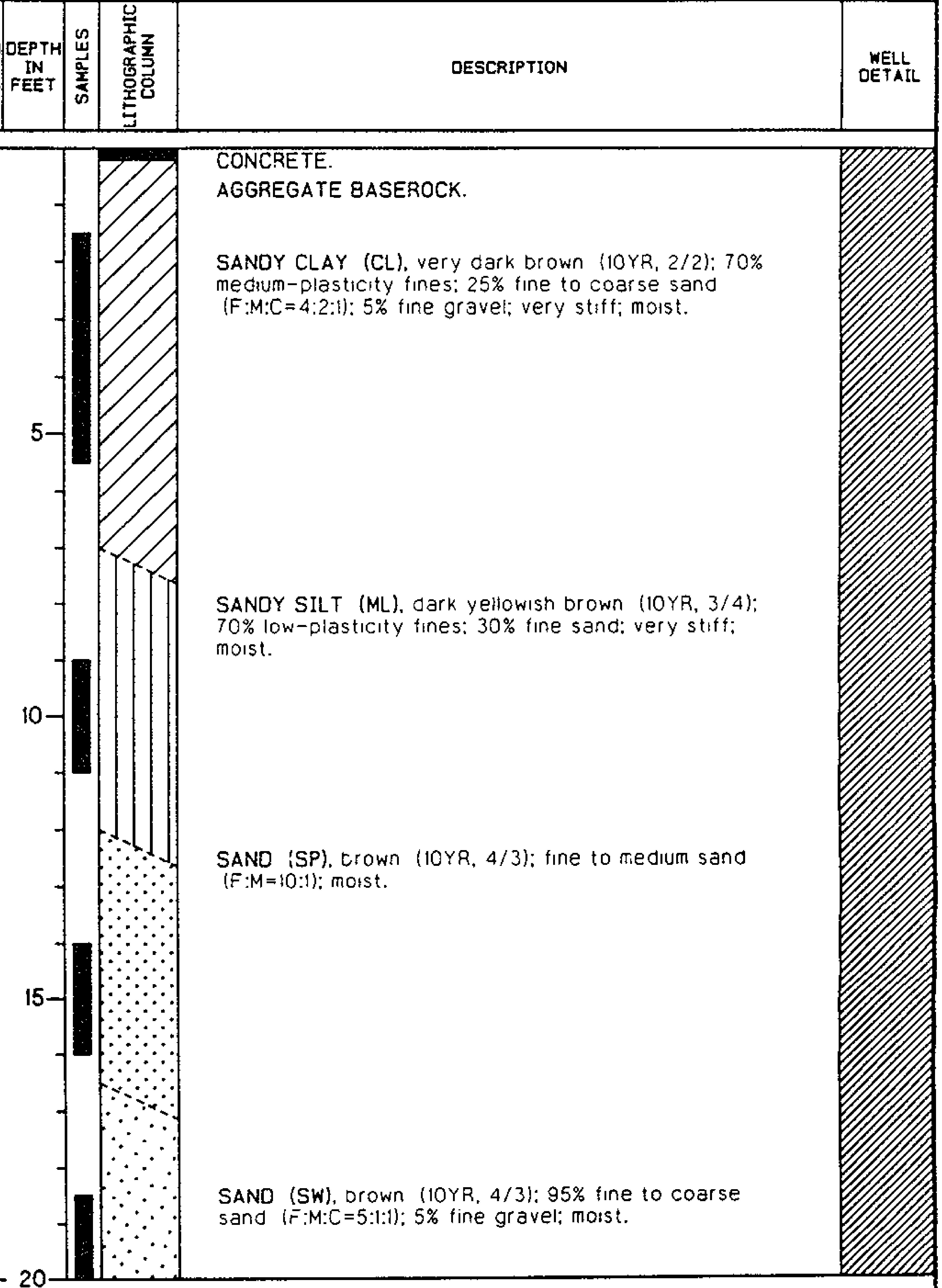
EMCON

97-036

LOG OF EXPLORATORY BORING

PROJECT NUMBER: **22152-001.001**
BORING NO.: **EB-14**
PROJECT NAME: **Federal Realty Investment Trust**
PAGE: **1** of **2**
BY: **P. Christianson**
DATE: **2/5/97**
SURFACE ELEVATION: **NA**

RECOVERY (ft/ft)	PID (ppm)	PENETRATION (blws/6")	GROUND WATER LEVELS	DEPTH IN FEET	DESCRIPTION
					CONCRETE.
					AGGREGATE BASEROCK.
					SANDY CLAY (CL), very dark brown (10YR, 2/2); 70% medium-plasticity fines; 25% fine to coarse sand (F:M:C=4:2:1); 5% fine gravel; very stiff; moist.
1.5/2.0	15.7				
1.0/2.0	13.3				
				5	
					SANDY SILT (ML), dark yellowish brown (10YR, 3/4); 70% low-plasticity fines; 30% fine sand; very stiff; moist.
				10	
1.9/2.0	17.5				
					SAND (SP), brown (10YR, 4/3); fine to medium sand (F:M=10:1); moist.
				15	
2.0/2.0	15.6				
					SAND (SW), brown (10YR, 4/3); 95% fine to coarse sand (F:M:C=5:1:1); 5% fine gravel; moist.
1.9/2.0	13.5			20	



REMARKS
Borings drilled with a direct push technology (geoprobe) drilling rig using 1.5-inch diameter steel rods and sampler. Borings backfilled to surface using portland cement.

EMCON

97-036

LOG OF EXPLORATORY BORING

PROJECT NUMBER: **22152-001.001**

BORING NO.: **EB-14**

PROJECT NAME: **Federal Realty Investment Trust**

PAGE: **2 of 2**

BY: **P. Christianson**

DATE: **2/5/97**

SURFACE ELEVATION: **NA**

RECOVERY (ft/ft)	PID (ppm)	PENETRATION (blws/6")	GROUND WATER LEVELS	DEPTH IN FEET	SAMPLES	LITHOGRAPHIC COLUMN	DESCRIPTION	WELL DETAIL
					■	⁚	SAND (SW), continued.	▨
							BORING TERMINATED AT 20.5 FEET (Drilled to 18.5 feet, sampled to 20.5 feet).	
				25				
				30				
				35				
				40				

EMCON

REMARKS

Borings drilled with a direct push technology (geoprobe) drilling rig using 1.5-inch diameter steel rods and sampler. Borings backfilled to surface using portland cement.

97-036

LOG OF EXPLORATORY BORING

PROJECT NUMBER: **22152-001.001**

BORING NO.: **EB-15**

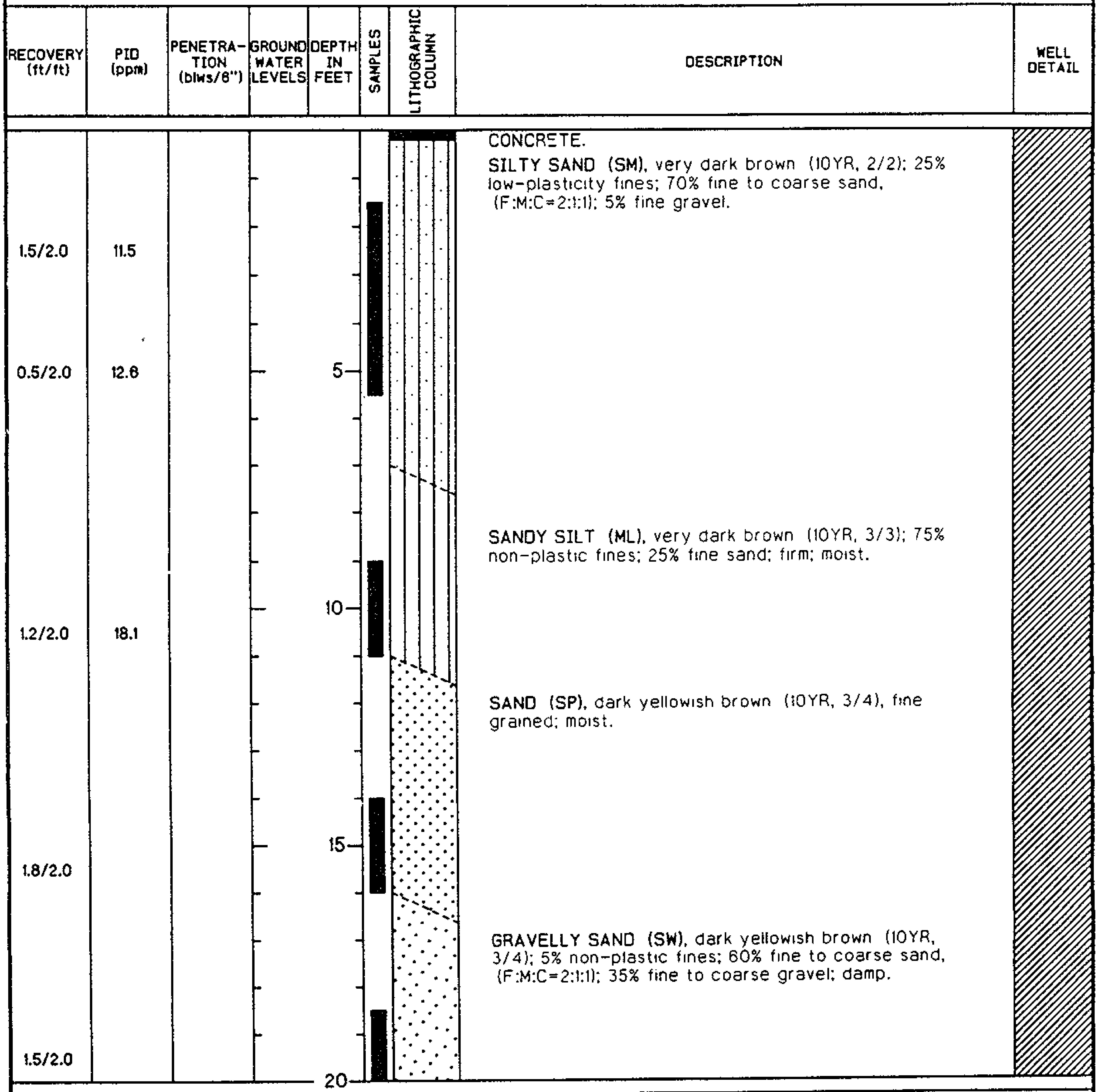
PROJECT NAME: **Federal Realty Investment Trust**

PAGE: **1 of 2**

BY: **P. Christianson**

DATE: **2/5/97**

SURFACE ELEVATION: **NA**



RECOVERY (ft/ft)	PID (ppm)
1.5/2.0	11.5
0.5/2.0	12.6
1.2/2.0	18.1
1.8/2.0	
1.5/2.0	

CONCRETE.

SILTY SAND (SM), very dark brown (10YR, 2/2); 25% low-plasticity fines; 70% fine to coarse sand, (F:M:C=2:1:1); 5% fine gravel.

SANDY SILT (ML), very dark brown (10YR, 3/3); 75% non-plastic fines; 25% fine sand; firm; moist.

SAND (SP), dark yellowish brown (10YR, 3/4), fine grained; moist.

GRAVELLY SAND (SW), dark yellowish brown (10YR, 3/4); 5% non-plastic fines; 60% fine to coarse sand, (F:M:C=2:1:1); 35% fine to coarse gravel; damp.

REMARKS

Borings drilled with a direct push technology (geoprobe) drilling rig using 1.5-inch diameter steel rods and sampler. Borings backfilled to surface using portland cement.

EMCON

97-036

LOG OF EXPLORATORY BORING

PROJECT NUMBER: **22152-001.001**

PROJECT NAME: **Federal Realty Investment Trust**

BY: **P. Christianson** DATE: **2/5/97**

BORING NO.: **EB-15**

PAGE: **2 of 2**

SURFACE ELEVATION: **NA**

RECOVERY (ft/ft)	PID (ppm)	PENETRATION (blws/6")	GROUND WATER LEVELS	DEPTH IN FEET	SAMPLES	LITHOGRAPHIC COLUMN	DESCRIPTION	WELL DETAIL
					■	· · · ·	GRAVELLY SAND (SW), continued. BORING TERMINATED AT 20.5 FEET (Drilled to 18.5 feet, sampled to 20.5 feet).	▨
				25				
				30				
				35				
				40				

REMARKS

Borings drilled with a direct push technology (geoprobe) drilling rig using 1.5-inch diameter steel rods and sampler. Borings backfilled to surface using portland cement.

97-036

EMCON

LOG OF EXPLORATORY BORING

PROJECT NUMBER: **22152-001.001**

BORING NO.: **EB-16**

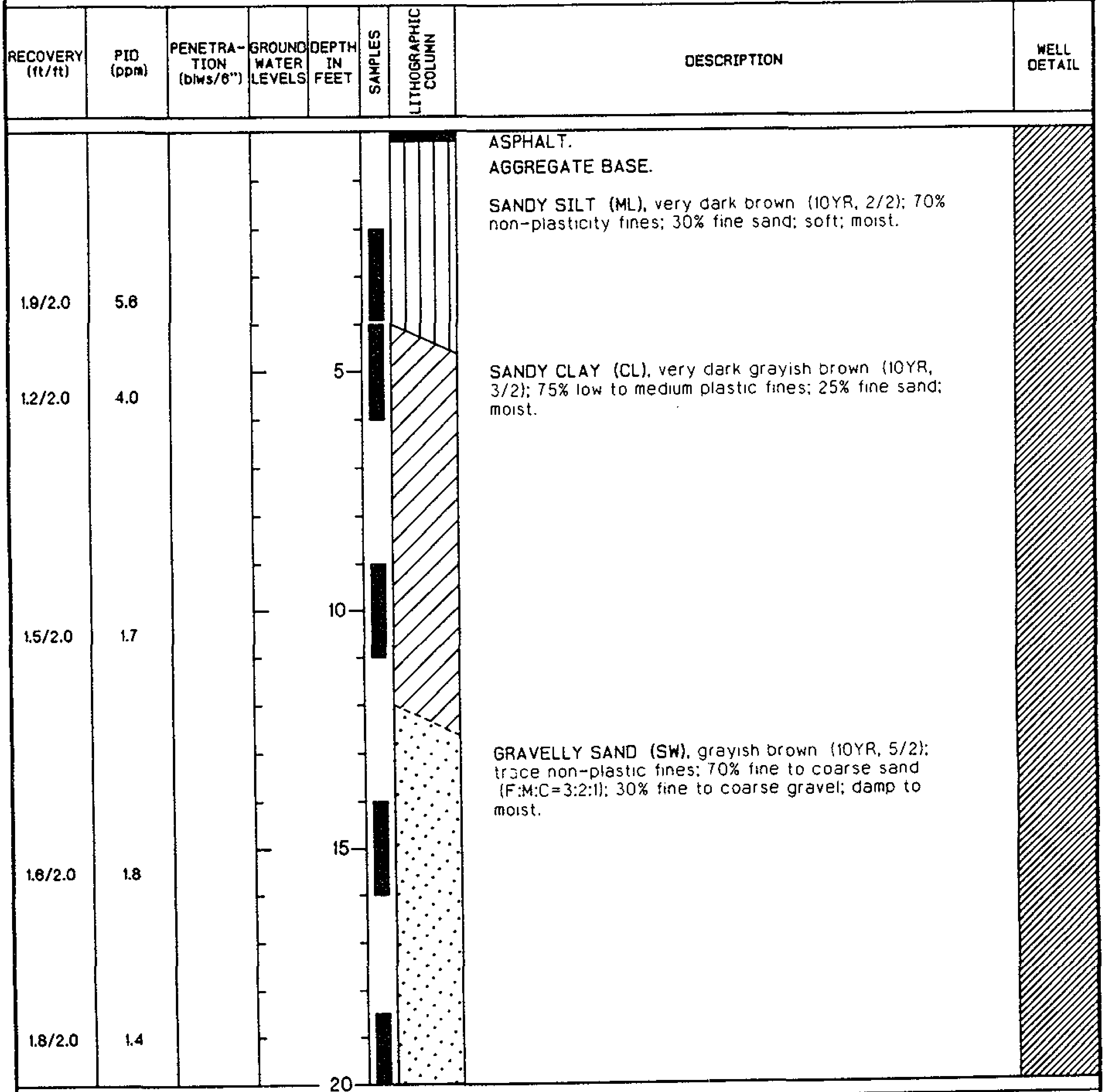
PROJECT NAME: **Federal Realty Investment Trust**

PAGE: **1** of **2**

BY: **P. Christianson**

DATE: **2/6/97**

SURFACE ELEVATION: **NA**



RECOVERY (ft/ft)	PID (ppm)
1.9/2.0	5.6
1.2/2.0	4.0
1.5/2.0	1.7
1.6/2.0	1.8
1.8/2.0	1.4

DESCRIPTION

ASPHALT.

AGGREGATE BASE.

SANDY SILT (ML), very dark brown (10YR, 2/2); 70% non-plasticity fines; 30% fine sand; soft; moist.

SANDY CLAY (CL), very dark grayish brown (10YR, 3/2); 75% low to medium plastic fines; 25% fine sand; moist.

GRAVELLY SAND (SW), grayish brown (10YR, 5/2); trace non-plastic fines; 70% fine to coarse sand (F:M:C=3:2:1); 30% fine to coarse gravel; damp to moist.

REMARKS

Borings drilled with a direct push technology (geoprobe) drilling rig using 1.5-inch diameter steel rods and sampler. Borings backfilled to surface using portland cement.

EMCON

97-036

LOG OF EXPLORATORY BORING

PROJECT NUMBER: **22152-001.001**

PROJECT NAME: **Federal Realty Investment Trust**

BY: **P. Christianson**

DATE: **2/6/97**

BORING NO.: **EB-18**

PAGE: **2 of 2**

SURFACE ELEVATION: **NA**

RECOVERY (ft/ft)	PID (ppm)	PENETRATION (blws/6")	GROUND WATER LEVELS	DEPTH IN FEET	SAMPLES	LITHOGRAPHIC COLUMN	DESCRIPTION	WELL DETAIL
					■	⁘	GRAVELLY SAND (SW), continued. BORING TERMINATED AT 20.5 FEET (Drilled to 18.5 feet, sampled to 20.5 feet).	▨
				25				
				30				
				35				
				40				

REMARKS

Borings drilled with a direct push technology (geoprobe) drilling rig using 1.5-inch diameter steel rods and sampler. Borings backfilled to surface using portland cement.

97-036

EMCON

LOG OF EXPLORATORY BORING

PROJECT NUMBER: **22152-001.001**

BORING NO.: **EB-17**

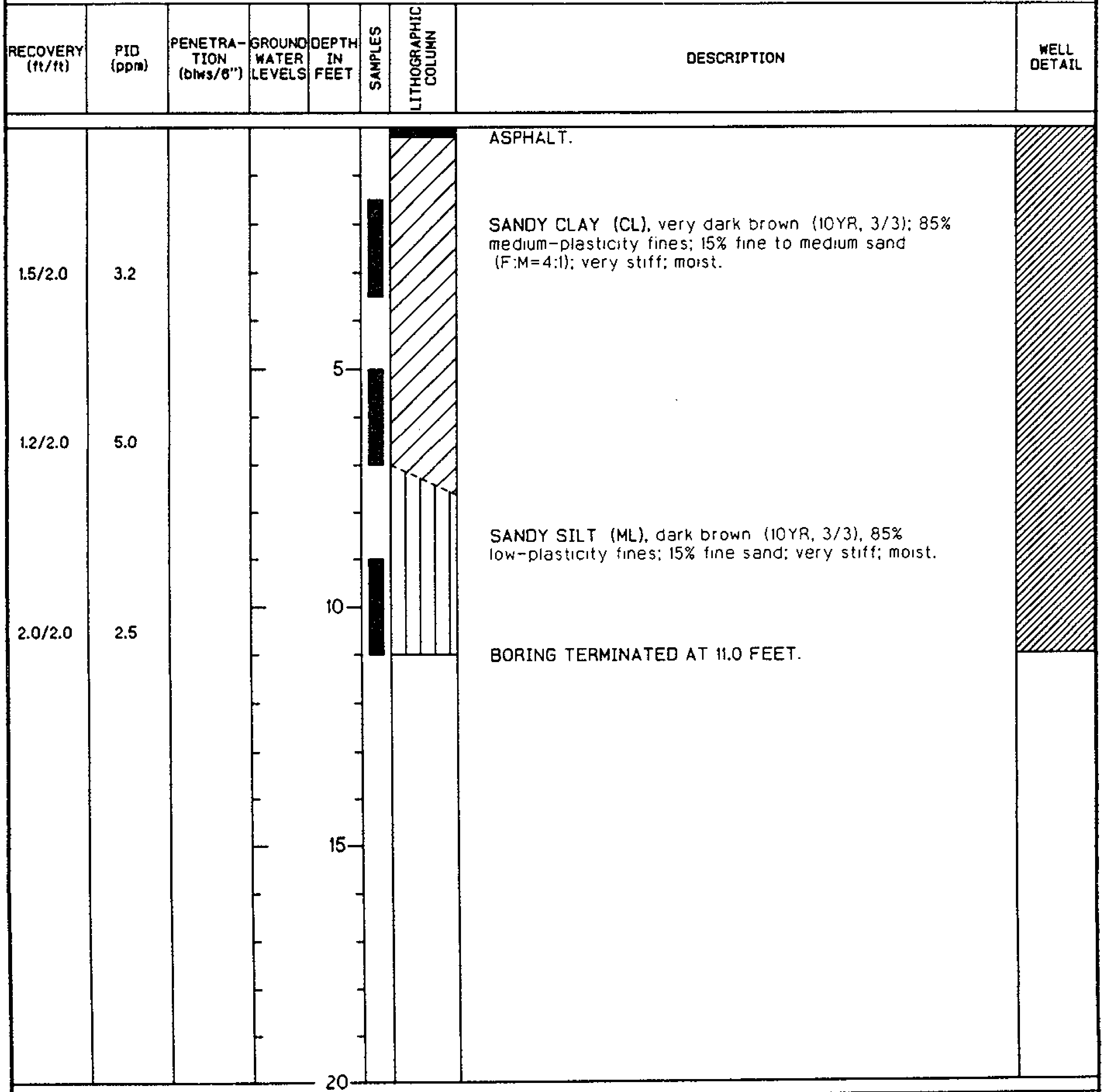
PROJECT NAME: **Federal Realty Investment Trust**

PAGE: **1 of 1**

BY: **P. Christianson**

DATE: **2/5/97**

SURFACE ELEVATION: **NA**



RECOVERY (ft/ft)	PID (ppm)	PENETRATION (blws/6")	GROUND WATER LEVELS	DEPTH IN FEET	SAMPLES	LITHOGRAPHIC COLUMN	DESCRIPTION	WELL DETAIL
							ASPHALT.	
1.5/2.0	3.2						SANDY CLAY (CL), very dark brown (10YR, 3/3); 85% medium-plasticity fines; 15% fine to medium sand (F:M=4:1); very stiff; moist.	
				5				
1.2/2.0	5.0							
							SANDY SILT (ML), dark brown (10YR, 3/3), 85% low-plasticity fines; 15% fine sand; very stiff; moist.	
				10				
2.0/2.0	2.5						BORING TERMINATED AT 11.0 FEET.	
				15				
				20				

REMARKS

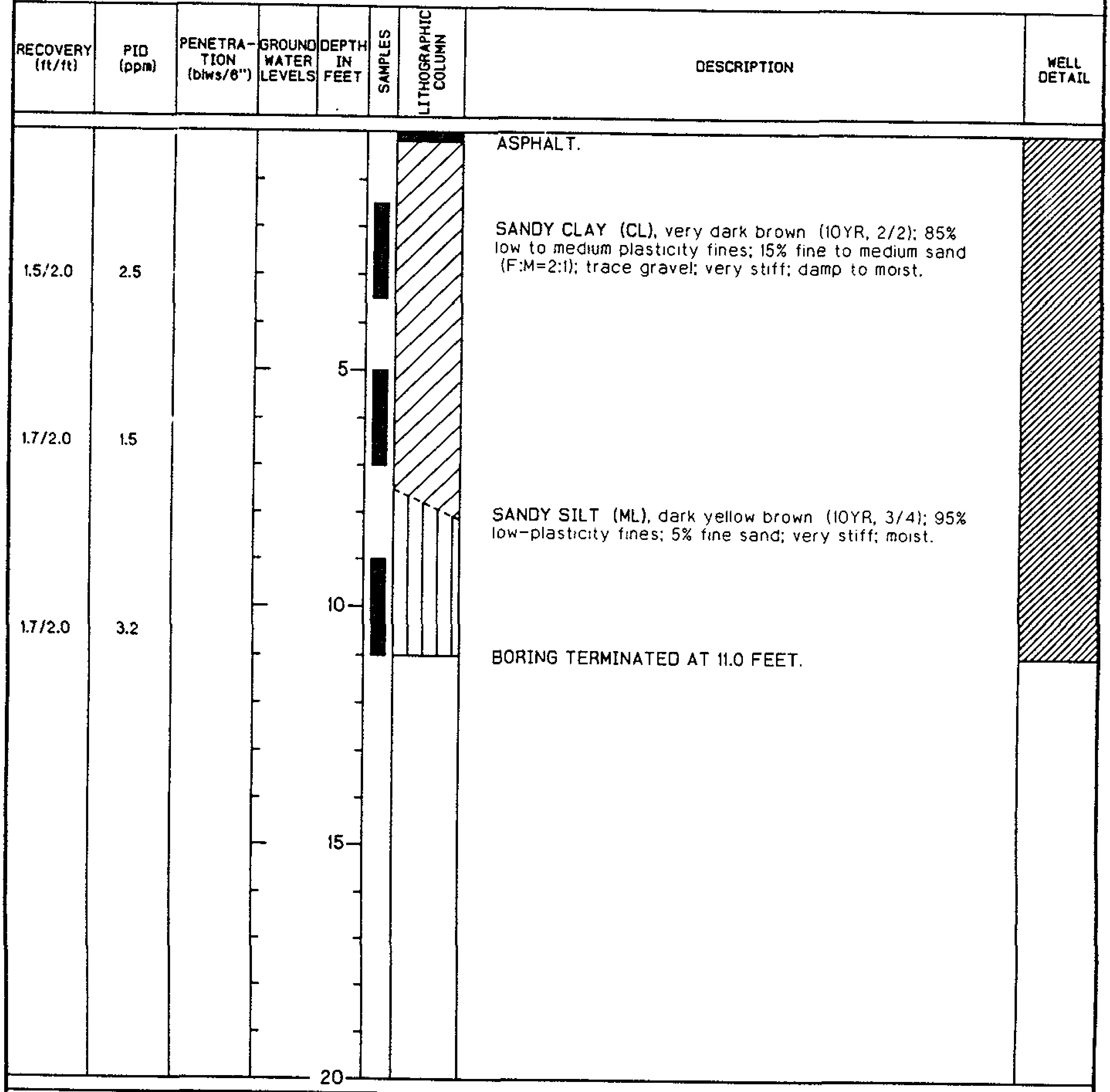
Borings drilled with a direct push technology (geoprobe) drilling rig using 1.5-inch diameter steel rods and sampler. Borings backfilled to surface using portland cement.

EMCON

97-036

LOG OF EXPLORATORY BORING

PROJECT NUMBER: **22152-001.001**
BORING NO.: **EB-18**
PROJECT NAME: **Federal Realty Investment Trust**
PAGE: **1 of 1**
BY: **P. Christianson**
DATE: **2/6/97**
SURFACE ELEVATION: **NA**



RECOVERY (ft/ft)	PID (ppm)	PENETRATION (blws/6")	GROUND WATER LEVELS	DEPTH IN FEET	SAMPLES	LITHOGRAPHIC COLUMN	DESCRIPTION	WELL DETAIL
							ASPHALT.	
							SANDY CLAY (CL), very dark brown (10YR, 2/2); 85% low to medium plasticity fines; 15% fine to medium sand (F:M=2:1); trace gravel; very stiff; damp to moist.	
1.5/2.0	2.5							
				5				
1.7/2.0	1.5							
							SANDY SILT (ML), dark yellow brown (10YR, 3/4); 95% low-plasticity fines; 5% fine sand; very stiff; moist.	
				10				
1.7/2.0	3.2							
							BORING TERMINATED AT 11.0 FEET.	
				15				
				20				

REMARKS

Borings drilled with a direct push technology (geoprobe) drilling rig using 1.5-inch diameter steel rods and sampler. Borings backfilled to surface using portland cement.

EMCON

97-036

LOG OF EXPLORATORY BORING

PROJECT NUMBER: **22152-001.001**
BORING NO.: **EB-19**
PROJECT NAME: **Federal Realty Investment Trust**
PAGE: **1 of 1**
BY: **P. Christianson**
DATE: **2/6/97**
SURFACE ELEVATION: **NA**

RECOVERY (ft/ft)	PID (ppm)	PENETRATION (blws/6")	GROUND WATER LEVELS	DEPTH IN FEET	SAMPLES	LITHOGRAPHIC COLUMN	DESCRIPTION	WELL DETAIL
							ASPHALT.	
							SANDY CLAY (CL), very dark brown (10YR, 2/2); 85% medium-plasticity fines; 15% fine to medium sand (F:M=4:1); trace fine gravel; very stiff; moist.	
1.8/2.0	9.6							
				5				
							CLAY (CL), very dark brown (10YR, 2/2); 90-95% medium-plasticity fines; 5-10% fine sand; stiff; moist.	
1.5/2.0	11.5							
							SILT (ML), dark brown (10YR, 3/3); 95% non-plastic fines; 5% fine sand; stiff; moist.	
				10				
1.8/2.0	8.5						BORING TERMINATED AT 11.0 FEET.	
				15				
				20				

REMARKS

Borings drilled with a direct push technology (geoprobe) drilling rig using 1.5-inch diameter steel rods and sampler. Borings backfilled to surface using portland cement.

EMCON

97-036

LOG OF EXPLORATORY BORING

PROJECT NUMBER: **22152-001.001**

BORING NO.: **EB-20**

PROJECT NAME: **Federal Realty Investment Trust**

PAGE: **1 of 1**

BY: **P. Christianson**

DATE: **2/6/97**

SURFACE ELEVATION: **NA**

RECOVERY (ft/ft)	PID (ppm)	PENETRATION (blws/6")	GROUND WATER LEVELS	DEPTH IN FEET	SAMPLES	LITHOGRAPHIC COLUMN	DESCRIPTION	WELL DETAIL
							ASPHALT.	
							AGGREGATE BASE.	
							CLAY (CL), very dark brown (10YR, 2/2); 95% low to medium-plasticity fines; 5% fine sand; trace gravel; very stiff; moist.	
1.5/2.0	12.5							
				5			@5.0': stiff.	
1.5/2.0	11.7							
				10				
1.8/2.0	10.4							
							BORING TERMINATED AT 11.0 FEET.	
				15				
				20				

REMARKS

Borings drilled with a direct push technology (geoprobe) drilling rig using 1.5-inch diameter steel rods and sampler. Borings backfilled to surface using portland cement.

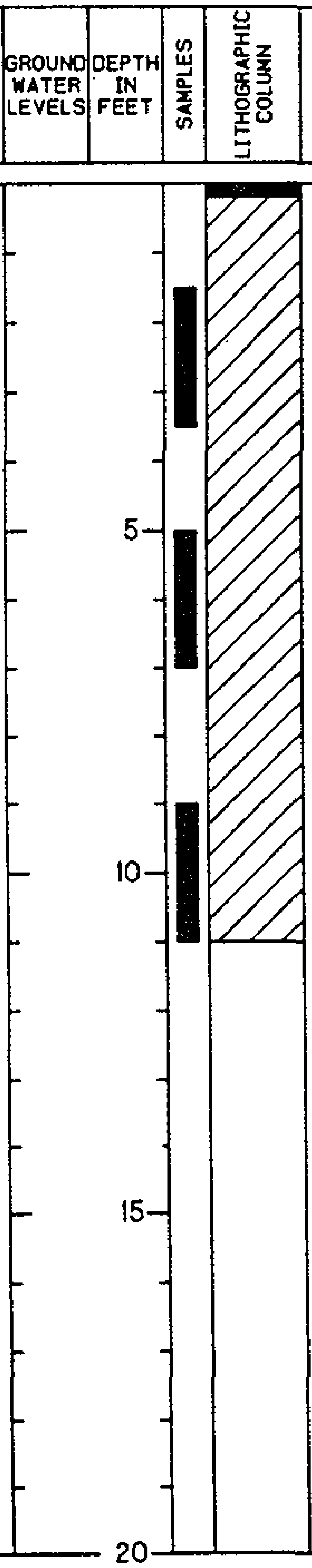
EMCON

97-036

LOG OF EXPLORATORY BORING

PROJECT NUMBER: **22152-001.001**
BORING NO.: **EB-21**
PROJECT NAME: **Federal Realty Investment Trust**
PAGE: **1 of 1**
BY: **P. Christianson**
DATE: **2/6/97**
SURFACE ELEVATION: **NA**

RECOVERY (ft/ft)	PID (ppm)	PENETRATION (blws/6")	GROUND WATER LEVELS
1.8/2.0	10.7		
1.0/2.0	9.8		
2.0/2.0	10.2		



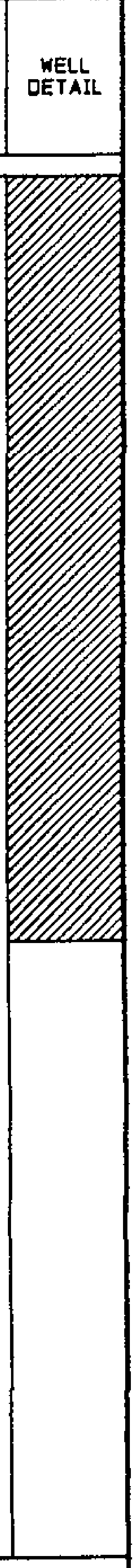
DESCRIPTION

ASPHALT.

AGGREGATE BASE.

CLAY (CL), very dark brown (10YR, 2/2); 95% low to medium-plasticity fines; 5% fine sand; very stiff; moist.

BORING TERMINATED AT 11.0 FEET.



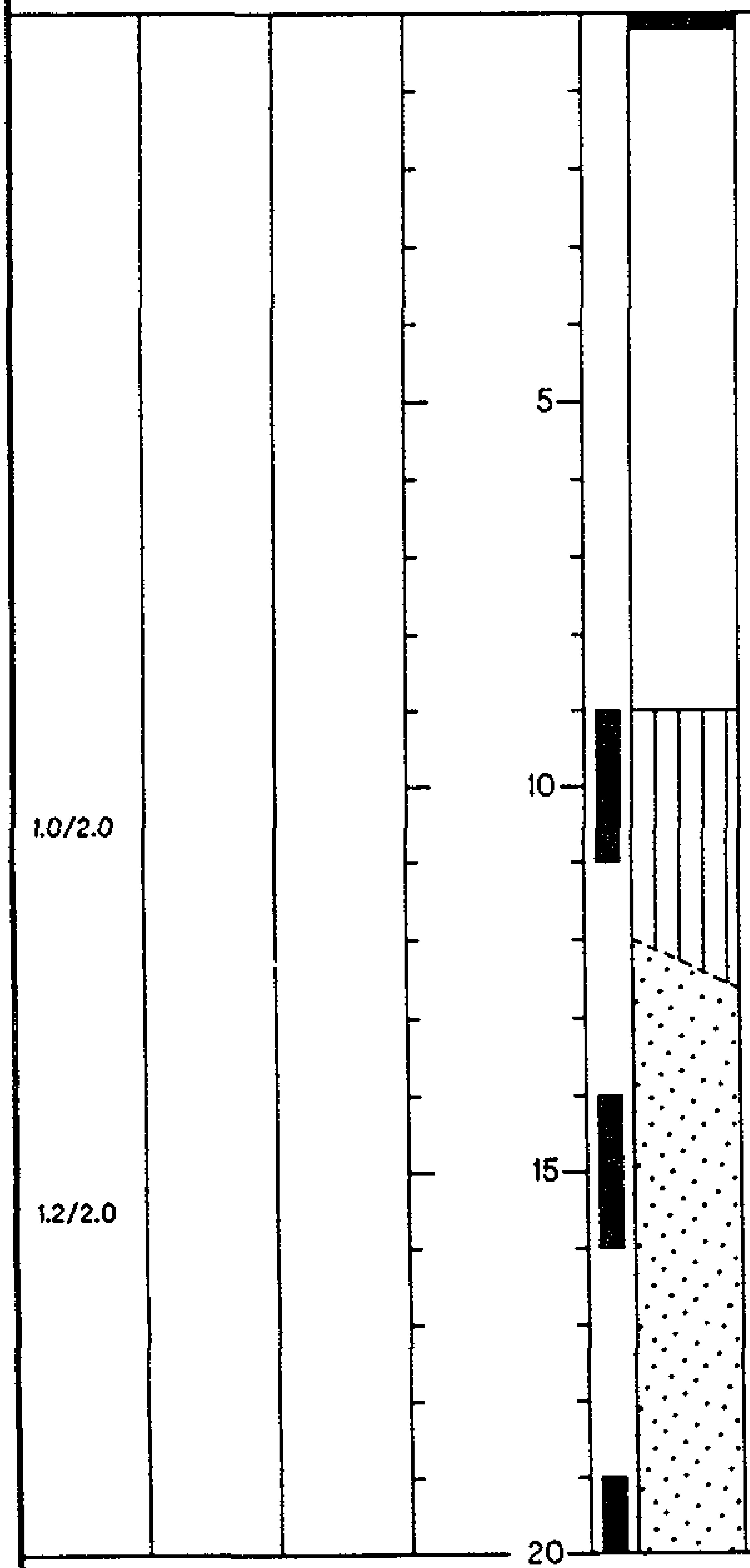
REMARKS
Borings drilled with a direct push technology (geoprobe) drilling rig using 1.5-inch diameter steel rods and sampler. Borings backfilled to surface using portland cement.

EMCON

97-036

LOG OF EXPLORATORY BORING

PROJECT NUMBER: **22152-001.001**
BORING NO.: **EB-22**
PROJECT NAME: **Federal Realty Investment Trust**
PAGE: **1 of 3**
BY: **P. Christianson**
DATE: **2/28/97**
SURFACE ELEVATION: **NA**



RECOVERY (ft/ft)	PID (ppm)	PENETRATION (blws/6")	GROUND WATER LEVELS	DEPTH IN FEET	SAMPLES	LITHOGRAPHIC COLUMN	DESCRIPTION	WELL DETAIL
							ASPHALT.	
							AGGREGATE BASE.	
				5				
							SANDY SILT (ML), dark brown (10YR, 3/3); 70% non-plastic fines; 30% fine sand; stiff; moist.	
1.0/2.0				10				
							GRAVELLY SAND (SW), dark grayish brown (10YR, 4/2); trace non-plastic fines; 60% fine to coarse sand, (F:M:C=2:1:1); 40% fine to coarse gravel; moist.	
1.2/2.0				15				
				20				

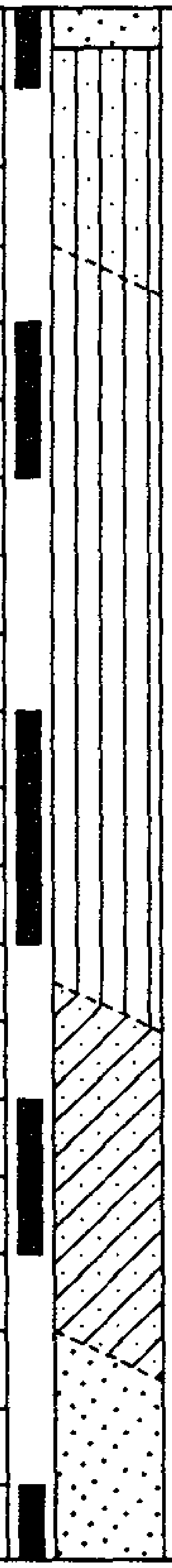
REMARKS
Borings drilled with a direct push technology (geoprobe) drilling rig using 1.5-inch diameter steel rods and sampler. Borings backfilled to surface using portland cement.

EMCON

97-036

LOG OF EXPLORATORY BORING

PROJECT NUMBER: **22152-001.001**
BORING NO.: **EB-22**
PROJECT NAME: **Federal Realty Investment Trust**
PAGE: **2 of 3**
BY: **P. Christianson**
DATE: **2/28/97**
SURFACE ELEVATION: **NA**



RECOVERY (ft/ft)	PID (ppm)	PENETRATION (blws/6")	GROUND WATER LEVELS	DEPTH IN FEET	SAMPLES	LITHOGRAPHIC COLUMN	DESCRIPTION	WELL DETAIL
1.5/2.0							GRAVELLY SAND (SW), continued. SILTY SAND (SM), dark grayish brown (10YR, 4/2); 15% non-plastic fines; 85% fine sand; medium dense; wet.	
1.8/2.0				25			SANDY SILT (ML), dark grayish brown (10YR, 4/2); 80% low-plasticity fines; 20% fine sand; stiff; wet.	
1.5/2.0				30			@29.0': 80% low-plasticity fines; 15% fine sand; 5% fine gravel; stiff; wet.	
2.0/2.0				35			CLAYEY SAND (SC), reddish brown (5Y, 4/4); 25% medium-plasticity fines; 75% fine sand; trace fine gravel; moist.	
				40			GRAVELLY SAND (SW), dark yellowish brown (10YR, 4/4); trace non-plastic fines; 70% fine to coarse sand (F:M:C=2:1:1); 30% fine to coarse gravel; moist to wet.	

REMARKS
Borings drilled with a direct push technology (geoprobe) drilling rig using 1.5-inch diameter steel rods and sampler. Borings backfilled to surface using portland cement.

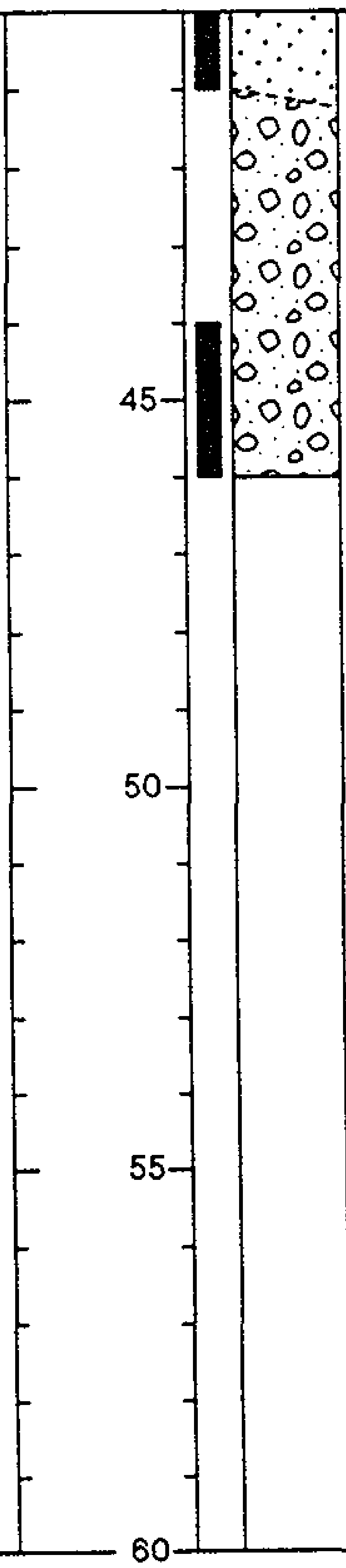
EMCON

97 - 036

LOG OF EXPLORATORY BORING

PROJECT NUMBER: **22152-001.001**
BORING NO.: **EB-22**
PROJECT NAME: **Federal Realty Investment Trust**
PAGE: **3 of 3**
BY: **P. Christianson**
DATE: **2/28/97**
SURFACE ELEVATION: **NA**

RECOVERY (ft/ft)	PID (ppm)	PENETRATION (blws/6")	GROUND WATER LEVELS	DEPTH IN FEET	SAMPLES	LITHOGRAPHIC COLUMN	DESCRIPTION	WELL DETAIL
1.5/2.0							GRAVELLY SAND (SW), continued.	
							SANDY GRAVEL (GW), brown (10YR, 4/3); 5% non-plastic fines; 30% fine to coarse sand (F:M:C=2:1:1); 65% fine to coarse gravel; moist to wet.	
1.0/2.0				45			BORING TERMINATED AT 46.0 FEET (Drilled to 44.0 feet, sampled to 46.0 feet).	



REMARKS
Borings drilled with a direct push technology (geoprobe) drilling rig using 1.5-inch diameter steel rods and sampler. Borings backfilled to surface using portland cement.

EMCON

97-036

Columbia
Analytical
Services inc.

February 12, 1997

Service Request No.: S9700219

Mr. Mark Smolley
EMCON
1921 Ringwood Avenue
San Jose, CA 95131

RE: Town & Country/Federal Realty/22152-001.001

Dear Mr. Smolley:

The following pages contain analytical results for sample(s) received by the laboratory on February 6, 1997. Results of sample analyses are followed by Appendix A which contains sample custody documentation and quality assurance deliverables requested for this project. The work requested has been assigned the Service Request No. listed above. To help expedite our service, please refer to this number when contacting the laboratory.

Analytical results were produced by procedures consistent with Columbia Analytical Services' (CAS) Quality Assurance Manual (with any deviations noted). Signature of this CAS Analytical Report below confirms that pages 2 through 16, following, have been thoroughly reviewed and approved for release in accord with CAS Standard Operating Procedure ADM-DatRev3.

Please feel welcome to contact me should you have questions or further needs.

Sincerely,

Steven L. Green
Project Chemist

97-036

2059 Junction Avenue ▪ San Jose, California 95131 ▪ Telephone 408/428-1280 ▪ Fax 408/437-9356

COLUMBIA ANALYTICAL SERVICES, Inc.

Acronyms

A2LA	American Association for Laboratory Accreditation
ASTM	American Society for Testing and Materials
BOD	Biochemical Oxygen Demand
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes
CAM	California Assessment Metals
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
COD	Chemical Oxygen Demand
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DLCS	Duplicate Laboratory Control Sample
DMS	Duplicate Matrix Spike
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
IC	Ion Chromatography
ICB	Initial Calibration Blank sample
ICP	Inductively Coupled Plasma atomic emission spectrometry
ICV	Initial Calibration Verification sample
J	Estimated concentration. The value is less than the MRL, but greater than or equal to the MDL. If the value is equal to the MRL, the result is actually <MRL before rounding.
LCS	Laboratory Control Sample
LUFT	Leaking Underground Fuel Tank
M	Modified
MBAS	Methylene Blue Active Substances
MCL	Maximum Contaminant Level. The highest permissible concentration of a substance allowed in drinking water as established by the U. S. EPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
MS	Matrix Spike
MTBE	Methyl tert-Butyl Ether
NA	Not Applicable
NAN	Not Analyzed
NC	Not Calculated
NCASI	National Council of the paper industry for Air and Stream Improvement
ND	Not Detected at or above the method reporting/detection limit (MRL/MDL)
NIOSH	National Institute for Occupational Safety and Health
NTU	Nephelometric Turbidity Units
ppb	Parts Per Billion
ppm	Parts Per Million
PQL	Practical Quantitation Limit
QA/QC	Quality Assurance/Quality Control
RCRA	Resource Conservation and Recovery Act
RPD	Relative Percent Difference
SIM	Selected Ion Monitoring
SM	Standard Methods for the Examination of Water and Wastewater, 18th Ed., 1992
STLC	Solubility Threshold Limit Concentration
SW	Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 3rd Ed., 1986 and as amended by Updates I, II, IIA, and IIB.
TCLP	Toxicity Characteristic Leaching Procedure
TDS	Total Dissolved Solids
TPH	Total Petroleum Hydrocarbons
tr	Trace level. The concentration of an analyte that is less than the PQL but greater than or equal to the MDL. If the value is equal to the PQL, the result is actually <PQL before rounding.
TRPH	Total Recoverable Petroleum Hydrocarbons
TSS	Total Suspended Solids
TTLC	Total Threshold Limit Concentration
VOA	Volatile Organic Analyte(s)

97 - 036

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: EMCON
Project: Town & Country/Federal Realty/22152-001.001
Sample Matrix: Soil

Service Request: S9700219
Date Collected: 2/5/97
Date Received: 2/6/97
Date Extracted: 2/6/97

Halogenated Volatile Organic Compounds
EPA Method 8260
Units: ug/Kg (ppb)
As Received Basis

	Sample Name:	**EB-11 @ 3.5'**	**EB-11 @ 8'**	**EB-11 @ 10'**
	Lab Code:	S9700219-001	S9700219-002	S9700219-003
	Date Analyzed:	2/7/97	2/7/97	2/7/97
Analyte	**MRL**			
Dichlorodifluoromethane (CFC 12)	100	ND	ND	ND
Chloromethane	100	ND	ND	ND
Vinyl Chloride	50	ND	ND	ND
Bromomethane	50	ND	ND	ND
Chloroethane	50	ND	ND	ND
Trichlorofluoromethane (CFC 11)	50	ND	ND	ND
1,1-Dichloroethene	50	ND	ND	ND
Trichlorotrifluoroethane (CFC 113)	50	ND	ND	ND
Methylene Chloride	50	ND	ND	ND
trans-1,2-Dichloroethene	50	ND	ND	ND
cis-1,2-Dichloroethene	50	ND	ND	ND
1,1-Dichloroethane	50	ND	ND	ND
Chloroform	50	ND	ND	ND
1,1,1-Trichloroethane (TCA)	50	ND	ND	ND
Carbon Tetrachloride	50	ND	ND	ND
1,2-Dichloroethane	50	ND	ND	ND
Trichloroethene (TCE)	50	ND	ND	ND
1,2-Dichloropropane	50	ND	ND	ND
Bromodichloromethane	50	ND	ND	ND
2-Chloroethyl Vinyl Ether	*500*	ND	ND	ND
trans-1,3-Dichloropropene	50	ND	ND	ND
cis-1,3-Dichloropropene	50	ND	ND	ND
1,1,2-Trichloroethane	50	ND	ND	ND
Tetrachloroethene (PCE)	50	1,200	140	ND
Dibromochloromethane	50	ND	ND	ND
Chlorobenzene	50	ND	ND	ND
Bromoform	50	ND	ND	ND
1,1,2,2-Tetrachloroethane	50	ND	ND	ND
1,3-Dichlorobenzene	100	ND	ND	ND
1,4-Dichlorobenzene	100	ND	ND	ND
1,2-Dichlorobenzene	100	ND	ND	ND

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: EMCON
Project: Town & Country/Federal Realty/22152-001.001
Sample Matrix: Soil

Service Request: S9700219
Date Collected: 2/5/97
Date Received: 2/6/97
Date Extracted: 2/6/97

Halogenated Volatile Organic Compounds
EPA Method 8260
Units: ug/Kg (ppb)
As Received Basis

	Sample Name:	**EB-11 @ 15'**	**EB-11 @ 20'**	**EB-12 @ 3'**
	Lab Code:	S9700219-004	S9700219-005	S9700219-006
	Date Analyzed:	2/7/97	2/7/97	2/7/97
Analyte	**MRL**			
Dichlorodifluoromethane (CFC 12)	100	ND	ND	ND
Chloromethane	100	ND	ND	ND
Vinyl Chloride	50	ND	ND	ND
Bromomethane	50	ND	ND	ND
Chloroethane	50	ND	ND	ND
Trichlorofluoromethane (CFC 11)	50	ND	ND	ND
1,1-Dichloroethene	50	ND	ND	ND
Trichlorotrifluoroethane (CFC 113)	50	ND	ND	ND
Methylene Chloride	50	ND	ND	ND
trans-1,2-Dichloroethene	50	ND	ND	ND
cis-1,2-Dichloroethene	50	ND	ND	ND
1,1-Dichloroethane	50	ND	ND	ND
Chloroform	50	ND	ND	ND
1,1,1-Trichloroethane (TCA)	50	ND	ND	ND
Carbon Tetrachloride	50	ND	ND	ND
1,2-Dichloroethane	50	ND	ND	ND
Trichloroethene (TCE)	50	ND	ND	ND
1,2-Dichloropropane	50	ND	ND	ND
Bromodichloromethane	50	ND	ND	ND
2-Chloroethyl Vinyl Ether	500	ND	ND	ND
trans-1,3-Dichloropropene	50	ND	ND	ND
cis-1,3-Dichloropropene	50	ND	ND	ND
1,1,2-Trichloroethane	50	ND	ND	ND
Tetrachloroethene (PCE)	50	280	200	180
Dibromochloromethane	50	ND	ND	ND
Chlorobenzene	50	ND	ND	ND
Bromoform	50	ND	ND	ND
1,1,2,2-Tetrachloroethane	50	ND	ND	ND
1,3-Dichlorobenzene	100	ND	ND	ND
1,4-Dichlorobenzene	100	ND	ND	ND
1,2-Dichlorobenzene	100	ND	ND	ND

97-036

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	EMCON	Service Request:	S9700219
Project:	Town & Country/Federal Realty/22152-001.001	Date Collected:	2/5/97
Sample Matrix:	Soil	Date Received:	2/6/97
		Date Extracted:	2/6/97

Halogenated Volatile Organic Compounds
EPA Method 8260
Units: ug/Kg (ppb)
As Received Basis

		Sample Name:	**EB-12 @ 5'**	**EB-12 @ 10'**	**EB-12 @ 15'**
		Lab Code:	S9700219-007	S9700219-008	S9700219-009
		Date Analyzed:	2/10/97	2/10/97	2/10/97
Analyte	**MRL**				
Dichlorodifluoromethane (CFC 12)	100		ND	ND	ND
Chloromethane	100		ND	ND	ND
Vinyl Chloride	50		ND	ND	ND
Bromomethane	50		ND	ND	ND
Chloroethane	50		ND	ND	ND
Trichlorofluoromethane (CFC 11)	50		ND	ND	ND
1,1-Dichloroethene	50		ND	ND	ND
Trichlorotrifluoroethane (CFC 113)	50		ND	ND	ND
Methylene Chloride	50		ND	ND	ND
trans-1,2-Dichloroethene	50		ND	ND	ND
cis-1,2-Dichloroethene	50		ND	ND	ND
1,1-Dichloroethane	50		ND	ND	ND
Chloroform	50		ND	ND	ND
1,1,1-Trichloroethane (TCA)	50		ND	ND	ND
Carbon Tetrachloride	50		ND	ND	ND
1,2-Dichloroethane	50		ND	ND	ND
Trichloroethene (TCE)	50		ND	ND	ND
1,2-Dichloropropane	50		ND	ND	ND
Bromodichloromethane	50		ND	ND	ND
2-Chloroethyl Vinyl Ether	500		ND	ND	ND
trans-1,3-Dichloropropene	50		ND	ND	ND
cis-1,3-Dichloropropene	50		ND	ND	ND
1,1,2-Trichloroethane	50		ND	ND	ND
Tetrachloroethene (PCE)	50		190	230	480
Dibromochloromethane	50		ND	ND	ND
Chlorobenzene	50		ND	ND	ND
Bromoform	50		ND	ND	ND
1,1,2,2-Tetrachloroethane	50		ND	ND	ND
1,3-Dichlorobenzene	100		ND	ND	ND
1,4-Dichlorobenzene	100		ND	ND	ND
1,2-Dichlorobenzene	100		ND	ND	ND

97-036

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: EMCON
Project: Town & Country/Federal Realty/22152-001.001
Sample Matrix: Soil

Service Request: S9700219
Date Collected: 2/5/97
Date Received: 2/6/97
Date Extracted: 2/6/97

Halogenated Volatile Organic Compounds
EPA Method 8260
Units: ug/Kg (ppb)
As Received Basis

		Sample Name:	**EB-12 @ 20'**	**EB-13 @ 3'**	**EB-13 @ 5'**
		Lab Code:	S9700219-010	S9700219-011	S9700219-012
		Date Analyzed:	2/10/97	2/10/97	2/10/97
Analyte	**MRL**				
Dichlorodifluoromethane (CFC 12)	100		ND	ND	ND
Chloromethane	100		ND	ND	ND
Vinyl Chloride	50		ND	ND	ND
Bromomethane	50		ND	ND	ND
Chloroethane	50		ND	ND	ND
Trichlorofluoromethane (CFC 11)	50		ND	ND	ND
1,1-Dichloroethene	50		ND	ND	ND
Trichlorotrifluoroethane (CFC 113)	50		ND	ND	ND
Methylene Chloride	50		ND	ND	ND
trans-1,2-Dichloroethene	50		ND	ND	ND
cis-1,2-Dichloroethene	50		ND	ND	ND
1,1-Dichloroethane	50		ND	ND	ND
Chloroform	50		ND	ND	ND
1,1,1-Trichloroethane (TCA)	50		ND	ND	ND
Carbon Tetrachloride	50		ND	ND	ND
1,2-Dichloroethane	50		ND	ND	ND
Trichloroethene (TCE)	50		ND	ND	ND
1,2-Dichloropropane	50		ND	ND	ND
Bromodichloromethane	50		ND	ND	ND
2-Chloroethyl Vinyl Ether	500		ND	ND	ND
trans-1,3-Dichloropropene	50		ND	ND	ND
cis-1,3-Dichloropropene	50		ND	ND	ND
1,1,2-Trichloroethane	50		ND	ND	ND
Tetrachloroethene (PCE)	50		430	260	270
Dibromochloromethane	50		ND	ND	ND
Chlorobenzene	50		ND	ND	ND
Bromoform	50		ND	ND	ND
1,1,2,2-Tetrachloroethane	50		ND	ND	ND
1,3-Dichlorobenzene	100		ND	ND	ND
1,4-Dichlorobenzene	100		ND	ND	ND
1,2-Dichlorobenzene	100		ND	ND	ND

97-036

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	EMCON	Service Request:	S9700219
Project:	Town & Country/Federal Realty/22152-001.001	Date Collected:	2/5/97
Sample Matrix:	Soil	Date Received:	2/6/97
		Date Extracted:	2/6/97

Halogenated Volatile Organic Compounds
EPA Method 8260
Units: ug/Kg (ppb)
As Received Basis

	Sample Name:	**EB-13 @ 10'**	**EB-13 @ 15'**	**EB-13 @ 20'**
	Lab Code:	S9700219-013	S9700219-014	S9700219-015
	Date Analyzed:	2/10/97	2/10/97	2/10/97
Analyte	**MRL**			
Dichlorodifluoromethane (CFC 12)	100	ND	ND	ND
Chloromethane	100	ND	ND	ND
Vinyl Chloride	50	ND	ND	ND
Bromomethane	50	ND	ND	ND
Chloroethane	50	ND	ND	ND
Trichlorofluoromethane (CFC 11)	50	ND	ND	ND
1,1-Dichloroethene	50	ND	ND	ND
Trichlorotrifluoroethane (CFC 113)	50	ND	ND	ND
Methylene Chloride	50	ND	ND	ND
trans-1,2-Dichloroethene	50	ND	ND	ND
cis-1,2-Dichloroethene	50	ND	ND	ND
1,1-Dichloroethane	50	ND	ND	ND
Chloroform	50	ND	ND	ND
1,1,1-Trichloroethane (TCA)	50	ND	ND	ND
Carbon Tetrachloride	50	ND	ND	ND
1,2-Dichloroethane	50	ND	ND	ND
Trichloroethene (TCE)	50	ND	ND	ND
1,2-Dichloropropane	50	ND	ND	ND
Bromodichloromethane	50	ND	ND	ND
2-Chloroethyl Vinyl Ether	500	ND	ND	ND
trans-1,3-Dichloropropene	50	ND	ND	ND
cis-1,3-Dichloropropene	50	ND	ND	ND
1,1,2-Trichloroethane	50	ND	ND	ND
Tetrachloroethene (PCE)	50	60	160	280
Dibromochloromethane	50	ND	ND	ND
Chlorobenzene	50	ND	ND	ND
Bromoform	50	ND	ND	ND
1,1,2,2-Tetrachloroethane	50	ND	ND	ND
1,3-Dichlorobenzene	100	ND	ND	ND
1,4-Dichlorobenzene	100	ND	ND	ND
1,2-Dichlorobenzene	100	ND	ND	ND

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	EMCON	**Service Request:**	S9700219
Project:	Town & Country/Federal Realty/22152-001.001	**Date Collected:**	2/5/97
Sample Matrix:	Soil	**Date Received:**	2/6/97
		Date Extracted:	2/6/97

Halogenated Volatile Organic Compounds
EPA Method 8260
Units: ug/Kg (ppb)
As Received Basis

		Sample Name:	**EB-14 @ 3'**	**EB-14 @ 5'**	**EB-14 @ 10'**
		Lab Code:	S9700219-016	S9700219-017	S9700219-018
		Date Analyzed:	2/10/97	2/10/97	2/10/97
Analyte	**MRL**				
Dichlorodifluoromethane (CFC 12)	100		ND	ND	ND
Chloromethane	100		ND	ND	ND
Vinyl Chloride	50		ND	ND	ND
Bromomethane	50		ND	ND	ND
Chloroethane	50		ND	ND	ND
Trichlorofluoromethane (CFC 11)	50		ND	ND	ND
1,1-Dichloroethene	50		ND	ND	ND
Trichlorotrifluoroethane (CFC 113)	50		ND	ND	ND
Methylene Chloride	50		ND	ND	ND
trans-1,2-Dichloroethene	50		ND	ND	ND
cis-1,2-Dichloroethene	50		ND	ND	ND
1,1-Dichloroethane	50		ND	ND	ND
Chloroform	50		ND	ND	ND
1,1,1-Trichloroethane (TCA)	50		ND	ND	ND
Carbon Tetrachloride	50		ND	ND	ND
1,2-Dichloroethane	50		ND	ND	ND
Trichloroethene (TCE)	50		ND	ND	ND
1,2-Dichloropropane	50		ND	ND	ND
Bromodichloromethane	50		ND	ND	ND
2-Chloroethyl Vinyl Ether	500		ND	ND	ND
trans-1,3-Dichloropropene	50		ND	ND	ND
cis-1,3-Dichloropropene	50		ND	ND	ND
1,1,2-Trichloroethane	50		ND	ND	ND
Tetrachloroethene (PCE)	50		120	88	ND
Dibromochloromethane	50		ND	ND	ND
Chlorobenzene	50		ND	ND	ND
Bromoform	50		ND	ND	ND
1,1,2,2-Tetrachloroethane	50		ND	ND	ND
1,3-Dichlorobenzene	100		ND	ND	ND
1,4-Dichlorobenzene	100		ND	ND	ND
1,2-Dichlorobenzene	100		ND	ND	ND

97-036

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	EMCON	**Service Request:**	S9700219
Project:	Town & Country/Federal Realty/22152-001.001	**Date Collected:**	2/5/97
Sample Matrix:	Soil	**Date Received:**	2/6/97
		Date Extracted:	2/6/97

Halogenated Volatile Organic Compounds
EPA Method 8260
Units: ug/Kg (ppb)
As Received Basis

	Sample Name:	**EB-14 @ 15'**	**EB-14 @ 20'**	**EB-15 @ 3'**
	Lab Code:	S9700219-019	S9700219-020	S9700219-021
	Date Analyzed:	2/10/97	2/10/97	2/10/97
Analyte	**MRL**			
Dichlorodifluoromethane (CFC 12)	100	ND	ND	ND
Chloromethane	100	ND	ND	ND
Vinyl Chloride	50	ND	ND	ND
Bromomethane	50	ND	ND	ND
Chloroethane	50	ND	ND	ND
Trichlorofluoromethane (CFC 11)	50	ND	ND	ND
1,1-Dichloroethene	50	ND	ND	ND
Trichlorotrifluoroethane (CFC 113)	50	ND	ND	ND
Methylene Chloride	50	ND	ND	ND
trans-1,2-Dichloroethene	50	ND	ND	ND
cis-1,2-Dichloroethene	50	ND	ND	ND
1,1-Dichloroethane	50	ND	ND	ND
Chloroform	50	ND	ND	ND
1,1,1-Trichloroethane (TCA)	50	ND	ND	ND
Carbon Tetrachloride	50	ND	ND	ND
1,2-Dichloroethane	50	ND	ND	ND
Trichloroethene (TCE)	50	ND	ND	ND
1,2-Dichloropropane	50	ND	ND	ND
Bromodichloromethane	50	ND	ND	ND
2-Chloroethyl Vinyl Ether	500	ND	ND	ND
trans-1,3-Dichloropropene	50	ND	ND	ND
cis-1,3-Dichloropropene	50	ND	ND	ND
1,1,2-Trichloroethane	50	ND	ND	ND
Tetrachloroethene (PCE)	50	66	210	130
Dibromochloromethane	50	ND	ND	ND
Chlorobenzene	50	ND	ND	ND
Bromoform	50	ND	ND	ND
1,1,2,2-Tetrachloroethane	50	ND	ND	ND
1,3-Dichlorobenzene	100	ND	ND	ND
1,4-Dichlorobenzene	100	ND	ND	ND
1,2-Dichlorobenzene	100	ND	ND	ND

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Analytical Report

Client:	EMCON	**Service Request:**	S9700219
Project:	Town & Country/Federal Realty/22152-001.001	**Date Collected:**	2/5/97
Sample Matrix:	Soil	**Date Received:**	2/6/97
		Date Extracted:	2/6/97

Halogenated Volatile Organic Compounds
EPA Method 8260
Units: ug/Kg (ppb)
As Received Basis

	Sample Name:	**EB-15 @ 5'**	**EB-15 @ 10'**	**EB-15 @ 15'**
	Lab Code:	S9700219-022	S9700219-023	S9700219-024
	Date Analyzed:	2/10/97	2/11/97	2/11/97
Analyte	**MRL**			
Dichlorodifluoromethane (CFC 12)	100	ND	ND	ND
Chloromethane	100	ND	ND	ND
Vinyl Chloride	50	ND	ND	ND
Bromomethane	50	ND	ND	ND
Chloroethane	50	ND	ND	ND
Trichlorofluoromethane (CFC 11)	50	ND	ND	ND
1,1-Dichloroethene	50	ND	ND	ND
Trichlorotrifluoroethane (CFC 113)	50	ND	ND	ND
Methylene Chloride	50	ND	ND	ND
trans-1,2-Dichloroethene	50	ND	ND	ND
cis-1,2-Dichloroethene	50	ND	ND	ND
1,1-Dichloroethane	50	ND	ND	ND
Chloroform	50	ND	ND	ND
1,1,1-Trichloroethane (TCA)	50	ND	ND	ND
Carbon Tetrachloride	50	ND	ND	ND
1,2-Dichloroethane	50	ND	ND	ND
Trichloroethene (TCE)	50	ND	ND	ND
1,2-Dichloropropane	50	ND	ND	ND
Bromodichloromethane	50	ND	ND	ND
2-Chloroethyl Vinyl Ether	500	ND	ND	ND
trans-1,3-Dichloropropene	50	ND	ND	ND
cis-1,3-Dichloropropene	50	ND	ND	ND
1,1,2-Trichloroethane	50	ND	ND	ND
Tetrachloroethene (PCE)	50	ND	150	94
Dibromochloromethane	50	ND	ND	ND
Chlorobenzene	50	ND	ND	ND
Bromoform	50	ND	ND	ND
1,1,2,2-Tetrachloroethane	50	ND	ND	ND
1,3-Dichlorobenzene	100	ND	ND	ND
1,4-Dichlorobenzene	100	ND	ND	ND
1,2-Dichlorobenzene	100	ND	ND	ND

97-036

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	EMCON	**Service Request:**	S9700219
Project:	Town & Country/Federal Realty/22152-001.001	**Date Collected:**	2/5/97
Sample Matrix:	Soil	**Date Received:**	2/6/97
		Date Extracted:	2/6/97

Halogenated Volatile Organic Compounds
EPA Method 8260
Units: ug/Kg (ppb)
As Received Basis

		Sample Name:	**EB-15 @ 20'**	**EB-16 @ 3'**	**EB-16 @ 5'**
		Lab Code:	S9700219-025	S9700219-026	S9700219-027
		Date Analyzed:	2/11/97	2/11/97	2/11/97
Analyte	**MRL**				
Dichlorodifluoromethane (CFC 12)	100		ND	ND	ND
Chloromethane	100		ND	ND	ND
Vinyl Chloride	50		ND	ND	ND
Bromomethane	50		ND	ND	ND
Chloroethane	50		ND	ND	ND
Trichlorofluoromethane (CFC 11)	50		ND	ND	ND
1,1-Dichloroethene	50		ND	ND	ND
Trichlorotrifluoroethane (CFC 113)	50		ND	ND	ND
Methylene Chloride	50		ND	ND	ND
trans-1,2-Dichloroethene	50		ND	ND	ND
cis-1,2-Dichloroethene	50		ND	ND	ND
1,1-Dichloroethane	50		ND	ND	ND
Chloroform	50		ND	ND	ND
1,1,1-Trichloroethane (TCA)	50		ND	ND	ND
Carbon Tetrachloride	50		ND	ND	ND
1,2-Dichloroethane	50		ND	ND	ND
Trichloroethene (TCE)	50		ND	ND	ND
1,2-Dichloropropane	50		ND	ND	ND
Bromodichloromethane	50		ND	ND	ND
2-Chloroethyl Vinyl Ether	500		ND	ND	ND
trans-1,3-Dichloropropene	50		ND	ND	ND
cis-1,3-Dichloropropene	50		ND	ND	ND
1,1,2-Trichloroethane	50		ND	ND	ND
Tetrachloroethene (PCE)	50		230	420	190
Dibromochloromethane	50		ND	ND	ND
Chlorobenzene	50		ND	ND	ND
Bromoform	50		ND	ND	ND
1,1,2,2-Tetrachloroethane	50		ND	ND	ND
1,3-Dichlorobenzene	100		ND	ND	ND
1,4-Dichlorobenzene	100		ND	ND	ND
1,2-Dichlorobenzene	100		ND	ND	ND

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	EMCON	**Service Request:**	S9700219
Project:	Town & Country/Federal Realty/22152-001.001	**Date Collected:**	2/5/97
Sample Matrix:	Soil	**Date Received:**	2/6/97
		Date Extracted:	2/6/97

Halogenated Volatile Organic Compounds
EPA Method 8260
Units: ug/Kg (ppb)
As Received Basis

		Sample Name:	**EB-16 @ 10'**	**EB-16 @ 15'**	**EB-16 @ 20'**
		Lab Code:	S9700219-028	S9700219-029	S9700219-030
		Date Analyzed:	2/11/97	2/11/97	2/11/97
Analyte	**MRL**				
Dichlorodifluoromethane (CFC 12)	100		ND	ND	ND
Chloromethane	100		ND	ND	ND
Vinyl Chloride	50		ND	ND	ND
Bromomethane	50		ND	ND	ND
Chloroethane	50		ND	ND	ND
Trichlorofluoromethane (CFC 11)	50		ND	ND	ND
1,1-Dichloroethene	50		ND	ND	ND
Trichlorotrifluoroethane (CFC 113)	50		ND	ND	ND
Methylene Chloride	50		ND	ND	ND
trans-1,2-Dichloroethene	50		ND	ND	ND
cis-1,2-Dichloroethene	50		ND	ND	ND
1,1-Dichloroethane	50		ND	ND	ND
Chloroform	50		ND	ND	ND
1,1,1-Trichloroethane (TCA)	50		ND	ND	ND
Carbon Tetrachloride	50		ND	ND	ND
1,2-Dichloroethane	50		ND	ND	ND
Trichloroethene (TCE)	50		ND	ND	ND
1,2-Dichloropropane	50		ND	ND	ND
Bromodichloromethane	50		ND	ND	ND
2-Chloroethyl Vinyl Ether	500		ND	ND	ND
trans-1,3-Dichloropropene	50		ND	ND	ND
cis-1,3-Dichloropropene	50		ND	ND	ND
1,1,2-Trichloroethane	50		ND	ND	ND
Tetrachloroethene (PCE)	50		160	450	520
Dibromochloromethane	50		ND	ND	ND
Chlorobenzene	50		ND	ND	ND
Bromoform	50		ND	ND	ND
1,1,2,2-Tetrachloroethane	50		ND	ND	ND
1,3-Dichlorobenzene	100		ND	ND	ND
1,4-Dichlorobenzene	100		ND	ND	ND
1,2-Dichlorobenzene	100		ND	ND	ND

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COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: EMCON
Project: Town & Country/Federal Realty/22152-001.001
Sample Matrix: Soil

Service Request: S9700219
Date Collected: NA
Date Received: NA
Date Extracted: 2/6/97

Halogenated Volatile Organic Compounds
EPA Method 8260
Units: ug/Kg (ppb)
As Received Basis

		Sample Name:	**Method Blank**	**Method Blank**
		Lab Code:	S970206-SB1	S970206-SB2
		Date Analyzed:	2/7/97	2/10/97
Analyte	**MRL**			
Dichlorodifluoromethane (CFC 12)	100		ND	ND
Chloromethane	100		ND	ND
Vinyl Chloride	50		ND	ND
Bromomethane	50		ND	ND
Chloroethane	50		ND	ND
Trichlorofluoromethane (CFC 11)	50		ND	ND
1,1-Dichloroethene	50		ND	ND
Trichlorotrifluoroethane (CFC 113)	50		ND	ND
Methylene Chloride	50		ND	ND
trans-1,2-Dichloroethene	50		ND	ND
cis-1,2-Dichloroethene	50		ND	ND
1,1-Dichloroethane	50		ND	ND
Chloroform	50		ND	ND
1,1,1-Trichloroethane (TCA)	50		ND	ND
Carbon Tetrachloride	50		ND	ND
1,2-Dichloroethane	50		ND	ND
Trichloroethene (TCE)	50		ND	ND
1,2-Dichloropropane	50		ND	ND
Bromodichloromethane	50		ND	ND
2-Chloroethyl Vinyl Ether	500		ND	ND
trans-1,3-Dichloropropene	50		ND	ND
cis-1,3-Dichloropropene	50		ND	ND
1,1,2-Trichloroethane	50		ND	ND
Tetrachloroethene (PCE)	50		ND	ND
Dibromochloromethane	50		ND	ND
Chlorobenzene	50		ND	ND
Bromoform	50		ND	ND
1,1,2,2-Tetrachloroethane	50		ND	ND
1,3-Dichlorobenzene	100		ND	ND
1,4-Dichlorobenzene	100		ND	ND
1,2-Dichlorobenzene	100		ND	ND

APPENDIX A

97-036

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	EMCON	**Service Request:**	S9700219
Project:	Town & Country/Federal Realty/22152-001.001	**Date Collected:**	2/5/97
Sample Matrix:	Soil	**Date Received:**	2/6/97
		Date Extracted:	2/6/97
		Date Analyzed:	NA

Surrogate Recovery Summary
Halogenated Volatile Organic Compounds
EPA Method 8260

Sample Name	**Lab Code**	**Percent Recovery** 4-Bromofluorobenzene
EB-11 @ 3.5'	S9700219-001	99
EB-11 @ 8'	S9700219-002	97
EB-11 @ 10'	S9700219-003	96
EB-11 @ 15'	S9700219-004	89
EB-11 @ 20'	S9700219-005	97
EB-12 @ 3'	S9700219-006	96
EB-12 @ 5'	S9700219-007	96
EB-12 @ 10'	S9700219-008	97
EB-12 @ 15'	S9700219-009	96
EB-12 @ 20'	S9700219-010	92
EB-13 @ 3'	S9700219-011	91
EB-13 @ 5'	S9700219-012	93
EB-13 @ 10'	S9700219-013	91
EB-13 @ 15'	S9700219-014	98
EB-13 @ 20'	S9700219-015	92
EB-14 @ 3'	S9700219-016	92
EB-14 @ 5'	S9700219-017	95
EB-14 @ 10'	S9700219-018	90
EB-14 @ 15'	S9700219-019	92
EB-14 @ 20'	S9700219-020	92
EB-15 @ 3'	S9700219-021	97

CAS Acceptance Limits: 74-125

97-036

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	EMCON	**Service Request:**	S9700219
Project:	Town & Country/Federal Realty/22152-001.001	**Date Collected:**	2/5/97
Sample Matrix:	Soil	**Date Received:**	2/6/97
		Date Extracted:	2/6/97
		Date Analyzed:	NA

Surrogate Recovery Summary
Halogenated Volatile Organic Compounds
EPA Method 8260

Sample Name	**Lab Code**	**Percent Recovery** 4-Bromofluorobenzene
EB-15 @ 5'	S9700219-022	92
EB-15 @ 10'	S9700219-023	92
EB-15 @ 15'	S9700219-024	91
EB-15 @ 20'	S9700219-025	100
EB-16 @ 3'	S9700219-026	93
EB-16 @ 5'	S9700219-027	91
EB-16 @ 10'	S9700219-028	89
EB-16 @ 15'	S9700219-029	99
EB-16 @ 20'	S9700219-030	98
Method Blank	S970206-SB1	94
Method Blank	S970206-SB2	93

CAS Acceptance Limits: 74-125

97-036

Columbia Analytical Services inc
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CHAIN OF CUSTODY/LABORATORY ANALYSIS REPORT FORM

SERVICE REQUEST NO. S9700319 PO# PAGE 1 OF 3

PROJECT NAME FEDERAL REALTY #22152-001.001
PROJECT MGR. MARK SMOLLEY
COMPANY/ADDRESS EMCON, SJ.
PHONE
FAX
SAMPLERS SIGNATURE Pete Christiansen

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	NUMBER OF CONTAINERS	Base/Neu/Acid Organics GC/MS 625/8270 (NP)	Volatile Organics GC/MS 624/8240/8260 (HCl)	Halogenated or Aromatic Volatiles 601/8010 X 602/8020 (HCl)	TPH as Gas/BTEX DHS LUFT / 8020 (HCl)	TPH as Diesel/HBHC DHS LUFT (NP)	TRPH - 418.1 (HCl)	Oil and Grease Method ____ (HCl)	Metals (total or dissolved) List Below (HNO₃)	pH, Cond, Cl, SO4, F, TDS, TSS Alk (circle) (NP)	NH3-N, COD, Total-P, TKN, NO3 / NO2 (circle) (H₂SO₄)	Total Organic Carbon TOC (H₂SO₄)	Total Phenols (H₂SO₄)	REMARKS
EB-11 @ 3.5'	2/5/97		1	Soil	1			X										
EB-11 @ 8'			2															
EB-11 @ 10'			3															
EB-11 @ 15'			4															
EB-11 @ 20'			5															
EB-12 @ 3'			6															
EB-12 @ 5'			7															
EB-12 @ 10'			8															
EB-12 @ 15'			9															
EB-12 @ 20'	↓		10	↓	↓			↓										

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature Pete Christiansen	Signature Mark Smolley	Signature	Signature
Printed Name Pete Christiansen	Printed Name Mark Smolley	Printed Name	Printed Name
Firm Emcon	Firm EMCON	Firm	Firm
Date/Time 2/6/97 0950	Date/Time 2/6/97 9:55	Date/Time	Date/Time

TURNAROUND REQUIREMENTS
24 hr 48 hr X 5 day
Standard (10-15 working days)
___ Provide Verbal Preliminary Results
___ Provide FAX preliminary Results
Requested Report Date ____

REPORT REQUIREMENTS
X I Routine Report
II Report (includes DUP, MS, MSD, as required, may be charged as samples)
III Data Validation Report (includes All Raw Data)
RWQCB
(MDLs/PQLs TRACE#)

RELINQUISHED BY:	RECEIVED BY:
Signature Mark Smolley	Signature Joanne Brown
Printed Name Mark Smolley	Printed Name Joanne Brown
Firm EMCON	Firm CAS
Date/Time 2/6/97 10:15	Date/Time 2-6-97 10:15

SPECIAL INSTRUCTIONS/COMMENTS: Results due 2/12
Circle which metals are to be analyzed.
Metals: Al Sb Ba Be B Cd Ca Cr Cu Co Fe Mg Mn Mo Ni K Ag Na Sn V Zn
As Pb Se Tl Hg

R9

97-036

DISTRIBUTION WHITE - return to originator YELLOW - lab PINK - retained by originator

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CHAIN OF CUSTODY/LABORATORY ANALYSIS REPORT FORM

SERVICE REQUEST NO. S9700312 P.O.#

PAGE 2 OF 3

PROJECT NAME Federal Realty #22152-001.001
PROJECT MGR. Smoiley
COMPANY/ADDRESS EMCON
1921 Ringwood Ave.
San Jose
PHONE 453-7300
FAX
SAMPLERS SIGNATURE Christianson

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	NUMBER OF CONTAINERS	Base/Neu/Acid Organics GC/MS 625/8270	Volatile Organics GC/MS 624/8240/8260	Halogenated or Aromatic Volatiles 601/8010 2 602/8020	TPH as Gas/BTEX DHS LUFT / 8020	TPH as Diesel/HBHC DHS LUFT	TRPH - 418.1	Oil and Grease Method	Metals (total or dissolved) List Below	pH, Cond, Cl, SO4, F, TDS, TSS Alk (circle)	NH3-N, COD, Total-P, TKN NO3 / NO2 (circle)	Total Organic Carbon TOC	Total Phenols					REMARKS
					PRESERVATIVE	NP	HCl	HCl	HCl	NP	HCl	HCl	HNO3	NP	H2SO4	H2SO4	H2SO4					
EB-13 @ 3	2/5/97		11	Soil	1			X														
EB-13 @ 5			12																			
EB-13 @ 10			13																			
EB-13 @ 15			14																			
EB-13 @ 20			15																			
EB-14 @ 3			16																			
EB-14 @ 5			17																			
EB-14 @ 10			18																			
EB-14 @ 15			19																			
EB-14 @ 20			20																			

97-036

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature Pete	Signature Mark Smolley	Signature	Signature
Printed Name Pete Christian	Printed Name Mark Smolley	Printed Name	Printed Name
Firm Emcon	Firm EMCON	Firm	Firm
Date/Time 2/6/97 0950	Date/Time 2/6/97 9:55	Date/Time	Date/Time

RELINQUISHED BY:	RECEIVED BY:
Signature Mark Smolley	Signature Jeanne Brown
Printed Name Mark Smolley	Printed Name Jeanne Brown
Firm EMCON	Firm CAS
Date/Time 2/6/97 10:15	Date/Time 2-6-97 10:15

TURNAROUND REQUIREMENTS
___ 24 hr 48 hr [✓ 5 day]
___ Standard (10-15 working days)
___ Provide Verbal Preliminary Results
___ Provide FAX preliminary Results
Requested Report Date

REPORT REQUIREMENTS
[✓ I Routine Report]
II Report (includes DUP MAS MSD, as required, may be charged as samples)
III Data Validation Report (includes All Raw Data)
RWQCB
(MDLs/PQLs/TRACE#)

SPECIAL INSTRUCTIONS/COMMENTS:
Circle which metals are to be analyzed.
Metals: Al Sb Ba Be B Cd Ca Cr Cu Co Fe Mg Mn Mo Ni K Ag Na Sn V Zn
As Pb Se Tl Hg

x9

DISTRIBUTION: WHITE - return to originator YELLOW - lab PINK - retained by originator

Columbia Analytical Services
2059 Junction Avenue • San Jose, CA 95131 • (408) 428-1280 • FAX (408) 437-9356

CHAIN OF CUSTODY/LABORATORY ANALYSIS REPORT FORM

SERVICE REQUEST NO: S9700319 P.O # PAGE 3 OF 3

PROJECT NAME Federal Realty #22152-001-00
PROJECT MGR Smolley
COMPANY/ADDRESS EMCON
1921 Ringwood Avenue
San Jose CA PHONE 453-7300
FAX
SAMPLERS SIGNATURE Christian Son

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	NUMBER OF CONTAINERS	Base/Neu/Acid Organics GC/MS 625/8270	~~Volatile Organics GC/MS 624/8240/8260~~	Halogenated or Aromatic Volatiles 601/8010 602/8020	TPH as Gas/BTEX DHS LUFT / 8020	TPH as Diesel:HBHC DHS LUFT	TRPH - 418.1	Oil and Grease Method ___	Metals (total or dissolved) List Below	pH, Cond, Cl, SO4, F, TDS, TSS Alk (circle)	NH3-N, COD, Total-P, TKN, NO3 / NO2 (circle)	Total Organic Carbon TOC	Total Phenols					REMARKS
PRESERVATIVE						NP	HCl	HCl	HCl	NP	HCl	HCl	HNO3	NP	H2SO4	H2SO4	H2SO4					
EB-15 @ 3'	2/6/97		21	Soils				X														
EB-15 @ 5'	↓		22	↓				↓														
EB-15 @ 10'			23																			
EB-15 @ 15'			24																			
EB-15 @ 20'			25																			
EB-16 @ 3'	2/6/97		26																			
EB-16 @ 5'	↓		27																			
EB-16 @ 10'			28																			
EB-16 @ 15'			29																			
EB-16 @ 20'			30																			

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature	Signature Mark Smolley	Signature	Signature
Printed Name Pete Christian	Printed Name Mark Smolley	Printed Name	Printed Name
Firm EMCON	Firm EMCON	Firm	Firm
Date/Time 2/6/97 0950	Date/Time 2/6/97 9:50	Date/Time	Date/Time

TURNAROUND REQUIREMENTS
___ 24 hr ___ 48 hr ✓ 3-5 day
___ Standard (10-15 working days)
___ Provide Verbal Preliminary Results
___ Provide FAX preliminary Results
Requested Report Date

REPORT REQUIREMENTS
✓ I. Routine Report
II. Report (includes DUP MAS MSD, as required, may be charged as samples)
III. Data Validation Report (includes All Raw Data)
RWQCB (MDLs/PQLs/TRACE#)

RELINQUISHED BY:	RECEIVED BY:
Signature Mark Smolley	Signature Joanne Brown
Printed Name Mark Smolley	Printed Name Joanne Brown
Firm EMCON	Firm CAS
Date/Time 2-6-97 10:15	Date/Time 2-6-97 10:15

SPECIAL INSTRUCTIONS/COMMENTS:
Circle which metals are to be analyzed:
Metals: Al Sb Ba Be B Cd Ca Cr Cu Co Fe Mg Mn Mo Ni K Ag Na Sn V Zn As Pb Se Tl Hg

K9

97-036

DISTRIBUTION: WHITE - return to originator; YELLOW - lab; PINK - retained by originator

FLUOR DANIEL GTI

October 28, 1997

Mr. Ben Hargrove
Department of Toxic Substances Control
700 Heinz Avenue
Berkeley, CA 94710

Dear Mr. Hargrove:

The following analysis and discussion of migration of perchloroethylene (PCE) in the vadose zone and groundwater beneath the former dry cleaner site in the Town and Country Village Shopping Center is a follow-up to our previous analysis using the SESOIL model. This additional analysis was completed at the request of DTSC.

In our analysis using SESOIL we simulated the leaching of PCE in soil beneath the site to the groundwater table, approximately 50 feet below ground surface. The initial concentrations of PCE in the vadose zone used in this scenario were based on the maximum concentrations found in soil samples from the site. Under these conservative conditions the results of the modeling showed that PCE would not reach the water table after 99 years. We believe this scenario is realistic.

At the request of DTSC we have evaluated the hypothetical scenario whereby groundwater is impacted by PCE and a dissolved-phase plume is migrating away from the site. This scenario is proposed based on the analytical results for some of the soil samples, notably EB-12, EB-13, and EB-16, that show PCE increasing slightly with depth. The trend of this slight increase was then extrapolated to predict a hypothetical PCE concentration at the water table. This conceptual model of contaminant migration would not be expected to occur because 1) there is no plausible release mechanism which accounts for a continuous, monotonic increase in concentration with depth to the water table, and 2) the natural attenuation which would be expected to occur is disregarded. It should be noted that to date, PCE has not been detected in groundwater beneath the site.

To evaluate this scenario, the solute fate and transport model, BIOSCREEN was used to simulate the migration of a hypothetical dissolved-phase PCE plume in groundwater moving northward along the known direction of groundwater flow, away from the hypothetical source. BIOSCREEN is a USEPA screening-level analytical model that simulates the processes of advection, dispersion, adsorption, and biodegradation. The attached table shows the parameters used in the model simulations and the rationale for parameter selection.

757 Arnold Drive, Suite D / Martinez, CA 94553 USA (510) 370-3990 FAX (510) 370-3991

Where a range of parameters was available, the most conservative value was selected, i.e., parameters were selected that would simulate the greatest hypothetical plume migration possible. A higher, and therefore more conservative, hydraulic conductivity value of 1×10^{-2} centimeters/second was selected to simulate the permeability of the gravelly sand within the saturated zone beneath the site. The initial hypothetical concentration of the dissolved-phase plume was estimated based upon the increasing concentrations of PCE in soil as indicated in soil borings EB-12, EB-13, and EB-16. As shown in the attached model input, a maximum concentration of 1200 micrograms per liter (1.2 mg/L) was calculated as the point source concentration.

Simulations were run to show the effects of advection, dispersion, and adsorption on plume mobility. The results of the 100-year simulation are illustrated in the attached schematic which shows dissolved PCE concentrations in the plume versus distance from the source area. Simulations of plume migration at 0.5, 10, 20, and 50 fifty years were also completed but show less migration than the 100-year simulation. As an additional element of conservativism, degradation of the plume was not simulated. Simulating degradation resulted in the plume completely disappearing within 10 years.

The 100-year simulation demonstrates the predicted PCE concentration to be zero at a distance of 1,600 to 1,800 feet downgradient of the source area. At this distance the hypothetical plume will not have migrated beyond the Town and Country property boundary. In addition, none of the predicted concentrations exceed acceptable risk thresholds, considering the anticipated future use of the property.

We trust the foregoing analysis provides sufficient information so that no further PCE characterization will be required. Please contact either of the undersigned if there are any final questions.

Sincerely,
Fluor Daniel GTI, Inc.
Submitted by:

Dennis Maslonkowski
Dennis Maslonkowski, R.G.
Principal Hydrogeologist

Fluor Daniel GTI, Inc.
Approved by:

Richard H. Green, R.G.
Project Manager

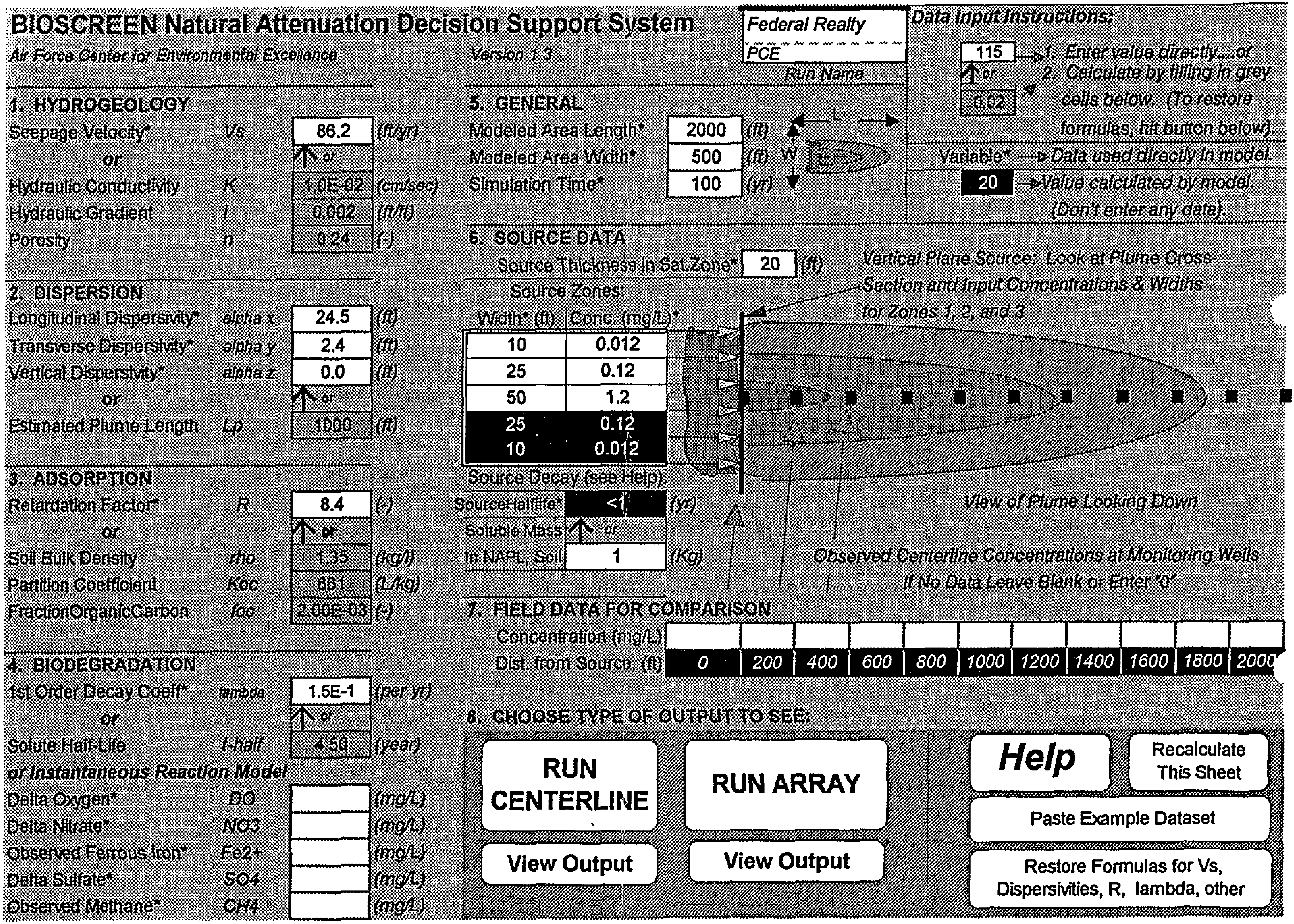
c: Nancy Herman, FRIT

97-036

BIOSCREEN MODELING PARAMETERS AND RATIONALE

Federal Realty - Town & Country Village Shopping Center
San Jose, California

Input Parameter	Value	Rationale
Simulation period (years)	100	Simulated migration of plume after 100 years to show maximum extent.
Hydraulic conductivity, K (cm/sec)	1.0E-02	Based on site lithology for gravelly sand.
Hydraulic gradient, i (ft/ft)	0.002	Based on March 1997 water levels; gradient to N-NW.
Effective porosity, n_e (dimensionless)	0.24	n_e based on previous SESOIL modeling for site.
Seepage velocity (ft/year)	86.2	Based on gradient, K, and porosity.
Aquifer thickness, b (ft)	20	Estimated thickness of upper aquifer.
Water table elevation (ft below ground surface)	49 - 53	Based on March 1997 water levels.
Longitudinal dispersivity, d_L (ft)	24.5	Range of d_L: 1 ft (for homogeneous aquifers) to 150 ft (for heterogeneous aquifers) (EPRI, 1991).
Ratio of transverse dispersivity, d_T, to longitudinal dispersivity, d_L (dimensionless)	0.1	Ratio range: 0.05-0.20 (Freyberg, 1986).
Soil bulk density of solids, B_d (kg/L)	1.35	Based on previous SESOIL modeling for site.
Partition Coefficient, K_{oc} - PCE (L/kg)	661	Based on HHSE for site.
Fraction organic carbon, foc (dimensionless)	0.2%	Based on previous SESOIL modeling for site.
Retardation factor, R_f (dimensionless)	8.4	Calculated from B_d, n_e, and distribution coefficient, K_d.
Constant source concentration, C_s (ug/l)	1200	Hypothetical PCE source concentration in groundwater based on PCE concentrations in soil.



BIOSCREEN Natural Attenuation Decision Support System

Air Force Center for Environmental Excellence

Version 1.3

Federal Realty
PCE
Run Name

Data Input Instructions:
115 → 1. Enter value directly....or
↑ or
0.02 ← 2. Calculate by filling in grey cells below. (To restore formulas, hit button below).
Variable* → Data used directly in model.
20 → Value calculated by model. (Don't enter any data).

1. HYDROGEOLOGY

Seepage Velocity*	Vs	86.2	(ft/yr)
or		↑ or	
Hydraulic Conductivity	K	1.0E-02	(cm/sec)
Hydraulic Gradient	i	0.002	(ft/ft)
Porosity	n	0.24	(-)

2. DISPERSION

Longitudinal Dispersivity*	alpha x	24.5	(ft)
Transverse Dispersivity*	alpha y	2.4	(ft)
Vertical Dispersivity*	alpha z	0.0	(ft)
or		↑ or	
Estimated Plume Length	Lp	1000	(ft)

3. ADSORPTION

Retardation Factor*	R	8.4	(-)
or		↑ or	
Soil Bulk Density	rho	1.35	(kg/l)
Partition Coefficient	Koc	661	(L/kg)
FractionOrganicCarbon	foc	2.00E-03	(-)

4. BIODEGRADATION

1st Order Decay Coeff*	lambda	1.5E-1	(per yr)
or		↑ or	
Solute Half-Life	t-half	4.50	(year)
or Instantaneous Reaction Model			
Delta Oxygen*	DO		(mg/L)
Delta Nitrate*	NO3		(mg/L)
Observed Ferrous Iron*	Fe2+		(mg/L)
Delta Sulfate*	SO4		(mg/L)
Observed Methane*	CH4		(mg/L)

5. GENERAL

Modeled Area Length*	2000	(ft)
Modeled Area Width*	500	(ft)
Simulation Time*	100	(yr)

6. SOURCE DATA

Source Thickness in Sat.Zone* 20 (ft)

Source Zones:

Width* (ft)	Conc. (mg/L)*
10	0.012
25	0.12
50	1.2
25	0.12
10	0.012

Vertical Plane Source: Look at Plume Cross-Section and Input Concentrations & Widths for Zones 1, 2, and 3

Source Decay (see Help)

SourceHalflife*	<1	(yr)
Soluble Mass	↑ or	
In NAPL, Soil	1	(Kg)

View of Plume Looking Down

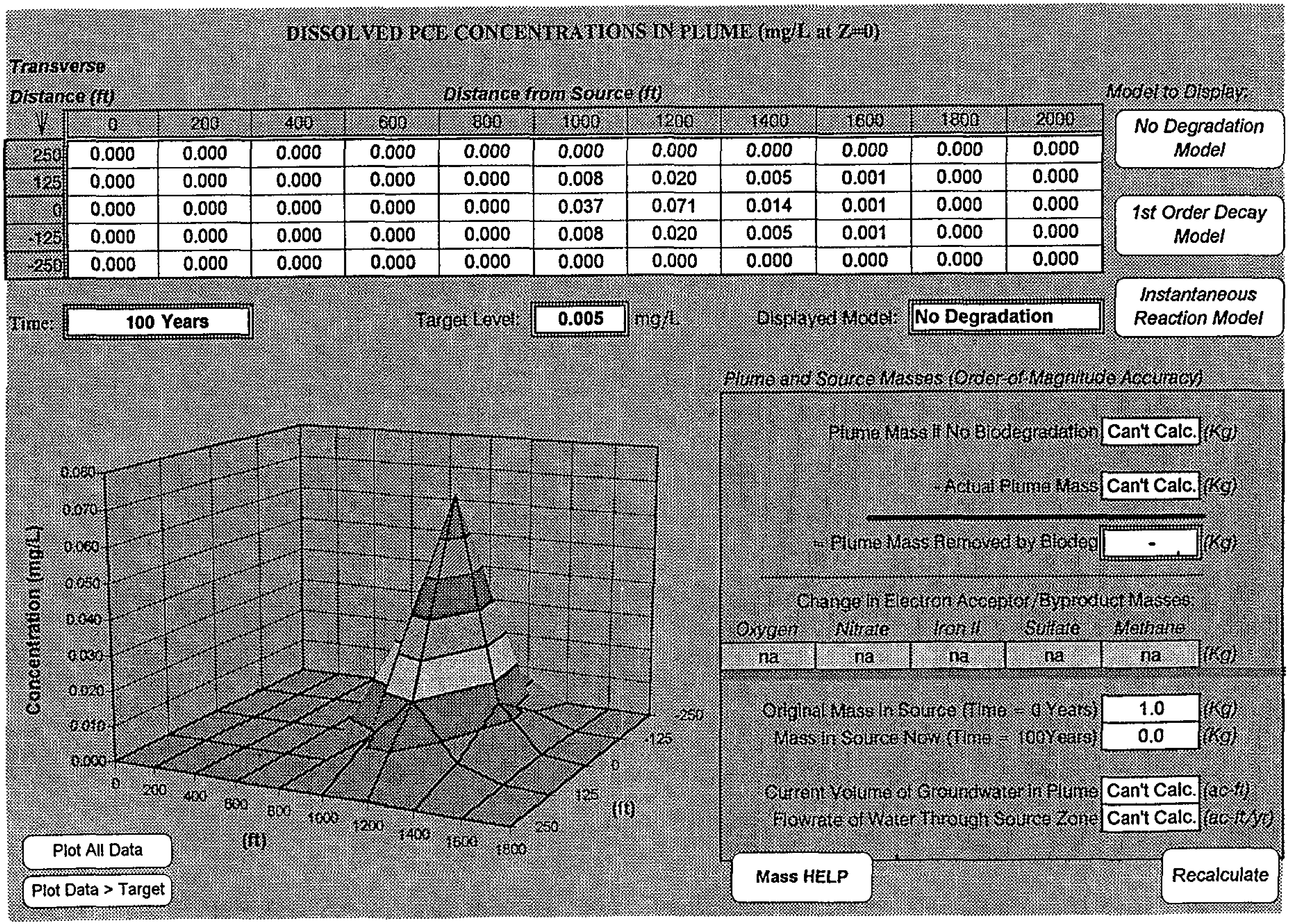
Observed Centerline Concentrations at Monitoring Wells
If No Data Leave Blank or Enter "0"

7. FIELD DATA FOR COMPARISON

Concentration (mg/L)											
Dist. from Source (ft)	0	200	400	600	800	1000	1200	1400	1600	1800	2000

8. CHOOSE TYPE OF OUTPUT TO SEE:

97-036



DISSOLVED PCE CONCENTRATIONS IN PLUME (mg/L at Z=0)

Transverse Distance (ft) ↓ \ Distance from Source (ft)	0	200	400	600	800	1000	1200	1400	1600	1800	2000
250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
125	0.000	0.000	0.000	0.000	0.000	0.008	0.020	0.005	0.001	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.037	0.071	0.014	0.001	0.000	0.000
-125	0.000	0.000	0.000	0.000	0.000	0.008	0.020	0.005	0.001	0.000	0.000
-250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Model to Display:

No Degradation Model

1st Order Decay Model

Instantaneous Reaction Model

Time: 100 Years

Target Level: 0.005 mg/L

Displayed Model: No Degradation

Plot All Data

Plot Data > Target

Plume and Source Masses (Order-of-Magnitude Accuracy)

Plume Mass If No Biodegradation: Can't Calc. (Kg)

- Actual Plume Mass: Can't Calc. (Kg)

= Plume Mass Removed by Biodeg: - (Kg)

Change in Electron Acceptor/Byproduct Masses:

Oxygen	Nitrate	Iron II	Sulfate	Methane	
na	na	na	na	na	(Kg)

Original Mass In Source (Time = 0 Years): 1.0 (Kg)

Mass in Source Now (Time = 100Years): 0.0 (Kg)

Current Volume of Groundwater in Plume: Can't Calc. (ac-ft)

Flowrate of Water Through Source Zone: Can't Calc. (ac-ft/yr)

Mass HELP

Recalculate

97 - 036

APPENDIX G

RESPONSES TO THE NOTICE OF PREPARATION

97-036

TECHNICAL SPECIFICATIONS

1. P.C.C. pavement with monolithic curb and gutter shall conform to the provisions in Section 40, "PORTLAND CEMENT CONCRETE PAVEMENT," and Section 90, "PORTLAND CEMENT CONCRETE" of the State Standard Specifications and these special provisions.

2. P.C.C. pavement shall be class A with a compressive strength of 4000 psi at the age of 28 days. Polypropylene fibers (Fibermesh or approved equal), length 1/2", shall be added to the concrete at a rate of 1 1/2 lbs/cy.

3. After spreading and compacting, P.C.C. shall be given a preliminary finish which shall be smooth and true to grade. In advance of curing operations, the pavement shall be given a final rough broom finish with grooves having a depth of 1/8" perpendicular to the curb and gutter.

4. All newly - placed concrete shall be cured in accordance with the provisions in Section 90-7, "Curing Concrete," of the State Standard Specifications. Curing compound to be used shall be applied to the P.C.C. following the surface finishing operations immediately before the moisture sheen disappears from the surface and before any drying, shrinkage or craze cracks begin to appear. Curing compound shall be applied at a nominal rate of one gallon per 150 square feet. At any point, the application rate shall be within +/- 50 square feet per gallon of the nominal rate specified.

5. Sawcutting of the contraction joints must be performed within 24 hours after concrete has received final surface finish.

6. Contractor shall protect P.C.C. pad as specified in Section 90-8.03, "Protecting Concrete Pavement." Where public traffic will be required to cross over new pavement, and if directed by the Engineer, Type III Portland Cement shall be used in concrete. When Type III Portland Cement is used in concrete, and if permitted in writing by the Engineer, the pavement may be opened to traffic as soon as the concrete has developed a modulus of rupture of 550 pounds per square inch. The modulus of rupture will be determined by California Test Method 523.

   No traffic or Contractor's equipment, except as hereinafter provided, will be permitted on the pavement before a period of ten (10) calendar days has elapsed after the concrete has been placed, nor before the concrete has developed a modulus of rupture of at least 550 pounds per square inch. Concrete that fails to attain a modulus of rupture of 550 pounds per square inch within 10 days shall not be opened to traffic until directed by the Engineer.

   Equipment for sawing contraction joints (weakened plane joints) will be permitted on the pavement as specified in Section 40-1.08B, "Weakened Plane Joints," of the State Standard Specifications.

7. Contraction joints, expansion joints and gaps between the P.C.C. pad and the existing pavement section shall be cleaned and sealed prior to permitting traffic on the pad. Removable cap joint shall be placed around the perimeter of the concrete pad excluding curb and gutter. Joint sealing compound shall be type "A" joint seal and shall conform to the provisions of Section 51-1.12F of the State Standard Specifications. The Z component polyurethane sealant shall be State Specification 8030 - 61J - 01 or approved equal.

SANTA CLARA VALLEY TRANSPORTATION AUTHORITY

BUS STOP PAVEMENT DETAILS

ATTACHMENT 1 FOR FIGURE 26

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY PETE WILSON, Governor

DEPARTMENT OF TRANSPORTATION
BOX 23660
OAKLAND, CA 94623-0660
(510) 286-4444
TDD (510) 286-4454

RECEIVED
SEP 03 1997
CITY OF SAN JOSE
PLANNING DEPARTMENT

August 28, 199

SCL-280-7.449
SCL280212

Ms. Lori Neff
Department of Planning, Building & Code Enforcement
City of San Jose
801 North First Street, Room 400
San Jose, CA 95110-1795

Dear Ms. Neff:

Re: Town and Country Village Project

Thank you for including the California State Department of Transportation (Caltrans) in the early stages of the environmental review process. We have reviewed the above referenced application and forward the following comments:

1. We recommend that a complete traffic study be conducted for this project, to determine impacts on SR880 and SR280 and all significantly affected streets, crossroads, and controlling intersections. Traffic impacts should be analyzed in terms of:
   a. Trip generation, distribution and assignment. The methodologies used in compiling the information should be explained. Data needs to be current.
   b. Average Daily Traffic (ADT), and AM ad PM peak hour volumes for SR880, SR280, and all other significantly affected streets and roadways, including crossroads and controlling intersections, for existing and future traffic.
2. Any work or traffic control done within State right-of-way will require an encroachment permit. To apply for a Caltrans permit, the applicant should submit a completed application, environmental documentation and five sets of plans to the following address:

G. J. Battaglini, District Office Chief
Caltrans, District 4
Office of Permits
P.O. Box 23660
Oakland, CA 94623-0660

Neff/SCL280212
August 28, 1997
Page 2

We appreciate the opportunity to work with you on this project. Should you require additional information or have any questions regarding this letter, please call James S. L. Jung of my staff at (510) 286-5725.

Sincerely,

HARRY Y. YAHATA
District Director

By: Phillip Badal

PHILLIP BADAL
District Branch Chief
IGR/CEQA

State of California
GOVERNOR'S OFFICE OF PLANNING AND RESEARCH
1400 TENTH STREET
SACRAMENTO 95814

PETE WILSON
GOVERNOR

LEE GRISSOM
DIRECTOR

RECEIVED
AUG 01 1997
CITY OF SAN JOSE
PLANNING DEPARTMENT

DATE: July 28, 1997

TO: Reviewing Agencies

RE: TOWN AND COUNTRY VILLAGE PROJECT
SCH# 97072085

Attached for your comment is the Notice of Preparation for the TOWN AND COUNTRY VILLAGE PROJECT draft Environmental Impact Report (EIR).

Responsible agencies must transmit their concerns and comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of this notice. We encourage commenting agencies to respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

LORI NEFF
CITY OF SAN JOSE
CITY HALL ANNEX ROOM 400
801 N. FIRST STREET
SAN JOSE, CA 95110-1795

with a copy to the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the review process, call Kristen Derscheid at (916) 445-0613.

Sincerely,

ANTERO A. RIVASPLATA
Chief, State Clearinghouse

Attachments

cc: Lead Agency

97-036

Historical Resources Information System
Northwest Information Center
Sonoma State University
1801 East Cotati Avenue
Rohnert Park, CA 94928-3609

U.S. POSTAGE
0 20
6810555

City of San Jose
Department of Planning
Building & Code Enforcement
Attn: Lori Neff
City Hall Annex, Room 400
801 N. First Street
San Jose, CA 95110-1795

August 7, 1997
15

File No.: 97SC-69E

re: Federal Realty Investment Trust.
File # PDC97-06-036

Dear Staff:

Our office has no additional comment on the above referenced document. However, thank you for your continued concern for protecting historical resources.

Sincerely,

Leigh Jordan
Coordinator, NWIC

97-036

August 11, 1997

Cal/EPA

Department of
Toxic Substances
Control

700 Heinz Avenue
Suite 200
Berkeley, CA
94710-2737

Pete Wilson
Governor

James M. Strock
Secretary for
Environmental
Protection

Ms. Lori Neff
City of San Jose Department of Planning
Building & Code Enforcement
City Hall Annex, Room 400
801 N. First Street
San Jose, California 95110-1795

RECEIVED
AUG 12 1997
CITY OF SAN JOSE
PLANNING DEPARTMENT

Dear Ms. Neff:

TOWN AND COUNTRY VILLAGE SHOPPING CENTER
RESPONSE TO CEQA NOTICE OF PREPARATION
FILE NO. PDC97-06-036

The Department of Toxic Substances Control (DTSC) has received the California Environmental Quality Act (CEQA) Notice of Preparation for the Town and Country Village Project in San Jose, California (Project). DTSC looks forward to seeing the Project come to fruition and working cooperatively with the planning agencies involved with the Project. As a responsible agency under CEQA, DTSC plans to use the Environmental Impact Report (EIR) prepared by the City of San Jose.

Federal Realty Investment Trust (FRIT) has performed the environmental characterization work. The characterization documents indicate that there are areas of the Project site that require remediation to address soils contaminated with tetrachloroethene (PCE), arsenic, lead, and chlorinated pesticides. DTSC expects the remedy for the Site to consist of a mix of excavation and offsite disposal and consolidation and capping in place.

The EIR must account for potential impacts of the cleanup work on earthen structures, air quality, surface and ground water, animal and plant life, land use, natural resources, risk of upset, public resources, energy, utilities, noise, public health and safety, aesthetics, cultural and paleontological resources, traffic, population, housing, recreation, and cumulative effects.

Since the CEQA documents for the Project should address potential effects of the cleanup work conducted before the development as well as the development itself, DTSC should be brought into the CEQA process early on to ensure that the full scope of effects is addressed. At your earliest convenience, please call Ben Hargrove at (510) 540-3845 to arrange a time to meet with DTSC to discuss these issues.

Printed on Recycled Paper

97-036

Sincerely,

K M Toth

Karen M. Toth, P.E.
Unit Chief
Northern California Coastal
Cleanup Operations Branch

cc: Ms. Tamara J. Gabel
Berliner Cohen
10 Almaden Boulevard, 11th Floor
San Jose, California 95113

Ms. Nancy Herman
Environmental Coordinator
Federal Realty Investment Trust
1626 E. Jefferson Street
Rockville, Maryland 20852

Mr. Guenther Moskat
Department of Toxic Substances Control
Office of Program Audits & Environmental Analysis
Planning and Environmental Analysis Section
400 P Street
Sacramento, California 95814

County of Santa Clara

Roads and Airports Department
Land Development and Permits

101 Skyport Drive
San Jose, California 95110

RECEIVED
AUG 12 1997
CITY OF SAN JOSE
PLANNING DEPARTMENT

August 11, 1997

Ms. Lori Neff
City of San Jose
Department of Planning
801 North First Street
San Jose, CA 95110

Subject: Notice Of Preparation Of An Environmental Impact Report (EIR) For The Town And Country Village Project City File No.: PDC 97-06-036

Dear Ms. Neff:

We have reviewed the subject Notice of Preparation. Our comments are as follows:

1. Under Transportation, the EIR should address the potential traffic impacts and mitigation measures by this project for the County's San Tomas Expressway.
2. The EIR should also address the cumulative traffic impacts and mitigation measures resulting from this project combined with other proposed development in the area.

Thank you for the opportunity to review and comment on this project. If you have any questions, please call me at 573-2460.

Sincerely,

Ed Evangelista

Ed Evangelista
Project Engineer

cc: M. Akbarzadeh
Central File
Project File

epe644

Ref:0523

Board of Supervisors: Donald F. Gage, Blanca Alvarado, Pete McHugh, James T. Beall, Jr., S. Joseph Simitian
County Executive: Richard Wittenberg

97-036

THE CITY OF SANTA CLARA
CALIFORNIA

PLANNING DIVISION
CITY HALL
1500 WARBURTON AVE
SANTA CLARA, CA 95050
(408) 984-3111
(FAX) (408) 241-3823

August 25, 1997

Lori Neff
City of San Jose, Dept. of Planning & Code Enforcement
City Hall Annex, Room 400
801 N. First Street
San Jose, CA 95110-1795

Dear Ms. Neff:

We are in receipt of the NOP for the redevelopment of the Town and Country Village Shopping Center at Winchester Boulevard and Stevens Creek Boulevard in the City of San Jose. We understand the project consists of a rezoning from Commercial (C-3) to Planned Development A(PD) to allow construction of a mixed use development, including up to 1,200 new residential units, up to 650,000 square feet of Commercial and retail space, up to 200 new hotel rooms, and eight parking structures with a total capacity of up to 4,500 parking spaces. We further understand that primary access to the site would remain from Stevens Creek Boulevard and Winchester Boulevard, with additional site access to be provided from northeast along Hemlock Avenue and from the south from Dudley Avenue.

The City of Santa Clara requests that a Transportation Impact Analysis (TIA) be prepared, based upon the Santa Clara Valley Transportation Authority's Congestion Management Program Guidelines.

Sincerely,

Art Henriques

Arthur E. Henriques
City Planner

I:\PLANNING\1997\sjosetwn&cntrynop.ltr.doc

97-036

RECEIVED
AUG 04 1997
CITY OF SAN JOSE
PLANNING DEPARTMENT

CITY OF CAMPBELL
Community Development Department · Current Planning

July 30, 1997

Ms. Lori Neff
City of San Jose Planning Office
City Hall Annex, Room 400
801 N. First Street
San Jose, CA 95110-1795

Re: Environmental Documents PDC 97-06-036 & H 97-02-012

Dear Ms. Neff:

The City of Campbell appreciates receiving the notice regarding the preparation of the environmental documents for the Town and Country Village Project and the Valley Fair Expansion Project. We would appreciate having a copy of each EIR sent to the following address:

Tim J. Haley, Associate Planner
City of Campbell
Community Development Department
70 N. First Street
Campbell, CA 95008

Thanks in advance for your assistance with this request. If you have any questions, I can be reached at (408) 866-2144.

Sincerely,

Tim J. Haley
Associate Planner

70 North First Street · Campbell, California 95008.1423 · TEL 408.866.2140 · FAX 408.866.8381 · TDD 408.866.2790

97-036

Santa Clara Valley Water District

5750 ALMADEN EXPRESSWAY
SAN JOSE, CA 95118-3686
TELEPHONE (408) 265-2600
FACSIMILE (408) 266-0271

AN AFFIRMATIVE ACTION EMPLOYER

RECEIVED
AUG 27 1997
CITY OF SAN JOSE
PLANNING DEPARTMENT

August 25, 1997

Department of Planning, Building,
and Code Enforcement
City of San Jose
Attention: Ms. Lori Neff
City Hall Annex,
801 N 1st St Rm 400
San Jose, CA 95110-1704

Dear Ms. Neff:

Subject: Town and Country Village Project, File Number PDC97-06-036

Santa Clara Valley Water District (District) staff have reviewed the Notice of Preparation of the Environmental Impact Report (EIR) for the subject project, received by us on July 28, 1997. It is noted that Drainage and Water Quality issues were not included. District concerns include changes in the quantity and quality of drainage and water quality. Storm water and other runoff will eventually be conveyed to a District facility such as San Tomas Aquino Creek. Redevelopment of this site will result in potential short-term and long-term changes. Please include these issues in the EIR.

The redevelopment of the shopping center will offer opportunities to design storm water quality control measures for the parking lots and other structures. The use of parking structures is generally advantageous from an urban runoff quality standpoint since the area of parking that is exposed to storm water is reduced. However, care should be taken so that maintenance activities, such as cleaning, do not result in pollutants entering the storm drain system and, thus, District facilities. The design of exterior parking should include consideration of parking lot best management practices (BMPs). Recommendations are contained in the *Parking Lot BMP Manual* produced by the Santa Clara Valley Urban Runoff Pollution Prevention Program (Program). Additional recommendations for site design that reduces storm water pollution are presented in the Bay Area Stormwater Management Agencies Association's *Start at the Source*. Both of these are available from the City of San Jose's urban runoff coordinator or from the Program, (800) 794-2482.

According to the Federal Emergency Management Agency's Flood Insurance Rate Map, this area is not subject to flooding during a 100-year, or 1 percent, event.

Our records do not indicate any wells at this site. In accordance with District Ordinance 90-1, any unregistered wells must be located and registered or properly destroyed. For additional information, please call Mr. Dave Zozaya, (408) 265-2607, extension 2650.

recycled paper

SANTA CLARA
Valley Transportation Authority

RECEIVED
AUG 28 1997
CITY OF SAN JOSE
PLANNING DEPARTMENT

August 26, 1997

City of San Jose
Department of Planning and Building
801 North First Street
San Jose, CA 95110

Attention: Lori Neff

Subject: City File No. PDC97-06-036 / Town and Country Village

Dear Ms. Neff:

Santa Clara Valley Transportation Authority (VTA) staff have reviewed the Notice of Preparation of a Draft EIR for the project referenced above to allow redevelopment of a 39-acre site with mixed use development at the southeast corner of South Winchester Boulevard and Stevens Creek Boulevard. The project will include 800-1,200 residential units, 525,000-650,000 square feet of commercial development, 100-200 hotel rooms, and 8 parking structures with a capacity of up to 4,500 spaces. VTA comments follow, and are separated into *Transit Service* and *Congestion Management Program (CMP)* issues to reflect our dual role in reviewing the project.

Transit Service

General

The NOP states that the "*EIR traffic analysis will identify the existing roadway conditions and other elements (bus routes, bike routes, et.)....*" We request that a separate section entitled "Transit Service" be added to the Environmental Setting, Impacts, and Mitigation Measures chapter of this project's Draft EIR.

Bus Service

The project site is served by *Line 60* along Winchester Boulevard. *Line 60* serves the site with 15 minute peak period headways and 30 minute off-peak period headways.

VTA maintains two bus stops on Winchester Boulevard, one north of Olson Drive and another north of Olin Drive, adjacent to the proposed project. There are about 60 daily boardings for these two stops. Winchester Boulevard in the vicinity of the project is a busy 6-lane arterial with a northbound curb lane that varies in width from 16.5 feet at the Olson Drive bus stop to 19

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feet at the Olin Drive bus stop. The width of both curb lanes is less than the VTA minimum standard curb lane width of 22 feet.

Therefore, in order to reduce potential traffic conflicts, enhance passenger convenience, and reduce project generated vehicle trips, VTA staff recommend that the City condition the developer to provide the following transit improvements:

- Bus duckouts (modified depth acceptable) with PCC pavement pads at the Olson Drive and Olin Drive bus stops consistent with *VTA Typical Bus Duckout and Bus Stop Pavement Details (Figures 22 and 26 and Technical Specifications*, attached).
- A sidewalk along Winchester Boulevard with a minimum width of 8 feet at the bus duckouts in compliance with *Americans with Disabilities (ADA)* bus stop access standards.
- A 7' X 25' PCC shelter pad with a #5 pull box, 1" conduit, capped stub-up and pull string behind the sidewalk at the Olson Drive bus stop consistent with *Stub-Up Details* in *VTA Bus Stop Configuration (Figure 20*, attached).
- Wheelchair curb ramps at all street and driveway intersections in compliance with *ADA* pedestrian circulation standards.

Site Design

We also recommend that the project incorporate design features to take advantage of the close proximity of this high density, mixed use project to transit service. Specifically, pedestrian networks which enable safe and convenient travel within the facility should be included, along with provisions for well defined, lighted pedestrian links between the project site and the bus stops.

Congestion Management Program (CMP)

CMP staff have the following recommendations concerning the traffic analysis for this project:

- Specific CMP facilities that should be analyzed in the Draft EIR and the Transportation Impact Analysis (TIA) include: I-880, I-280, Stevens Creek Boulevard, and San Thomas Expressway. The proposed project may also have impacts to Saratoga Avenue.
- When evaluating transportation facilities located in adjacent jurisdictions, there should be coordination with staff from these other jurisdictions.
- Also, the analysis of intersections and freeway ramps should include the impact of ramp metering, if metering is present or planned.
- CMP statutes require that a local jurisdiction use a computer model consistent with the designated CMP transportation model when determining transportation impacts of land use decisions on the CMP network. Therefore because the Draft EIR will address transportation

impacts on the CMP's designated roadway, transit, and bicycle network, the TIA for the Draft EIR should use trip distribution standards and land use projections consistent with the CMA model maintained by the Center for Urban Analysis.

- In addition, the TIA should be coordinated with the traffic analysis being completed for the proposed Valley Fair expansion project. The Valley Fair expansion project should be included in the cumulative impact analysis.

Thank you for the opportunity to review this project. If you have any questions, please call Roy Molseed of my staff at (408) 321-5784.

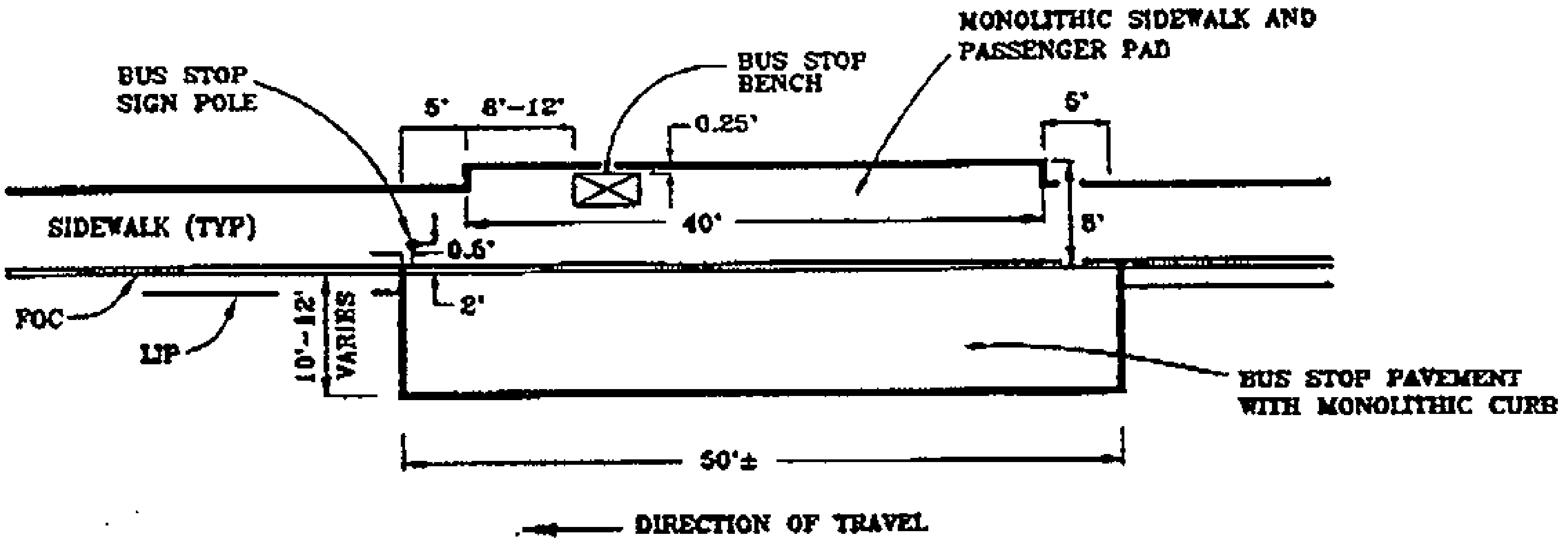
Sincerely,

Thomas Rountree
Environmental Program Manager

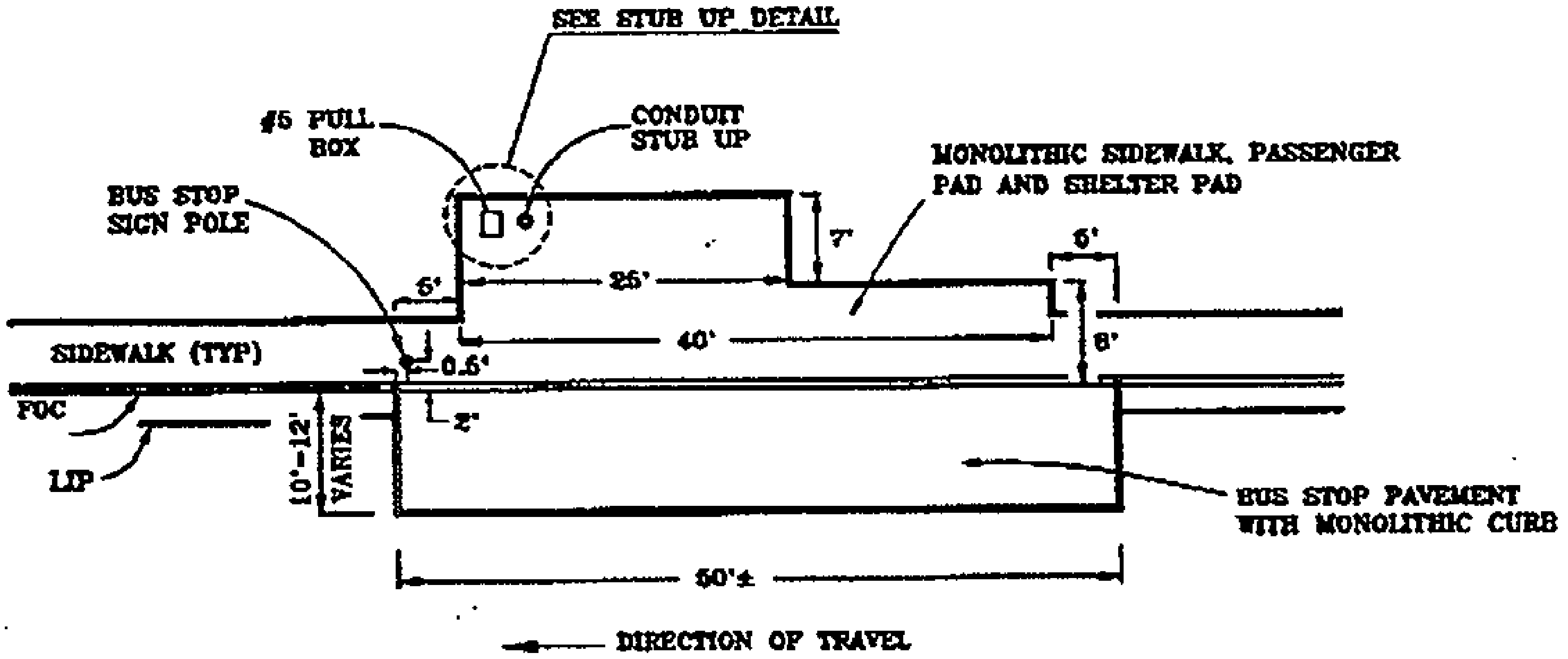
TDR:RM:sr

cc: Ron Conn, San Jose Public Works Department

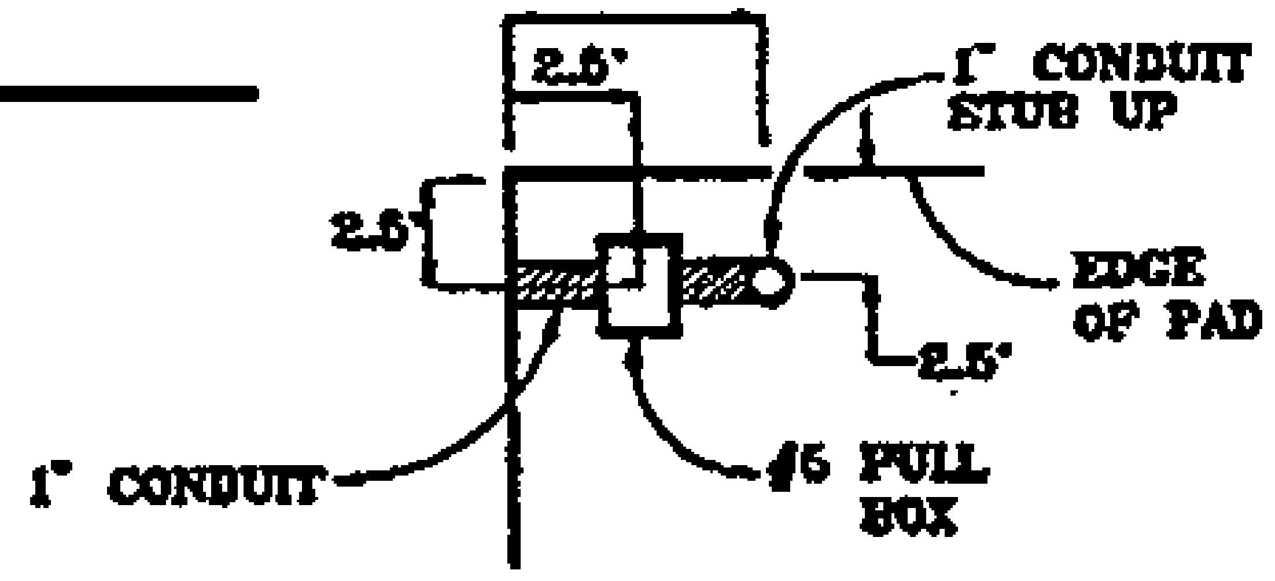
97-036



BUS STOP AND PASSENGER PAD WITHOUT SHELTER



BUS STOP AND PASSENGER PAD WITH SHELTER



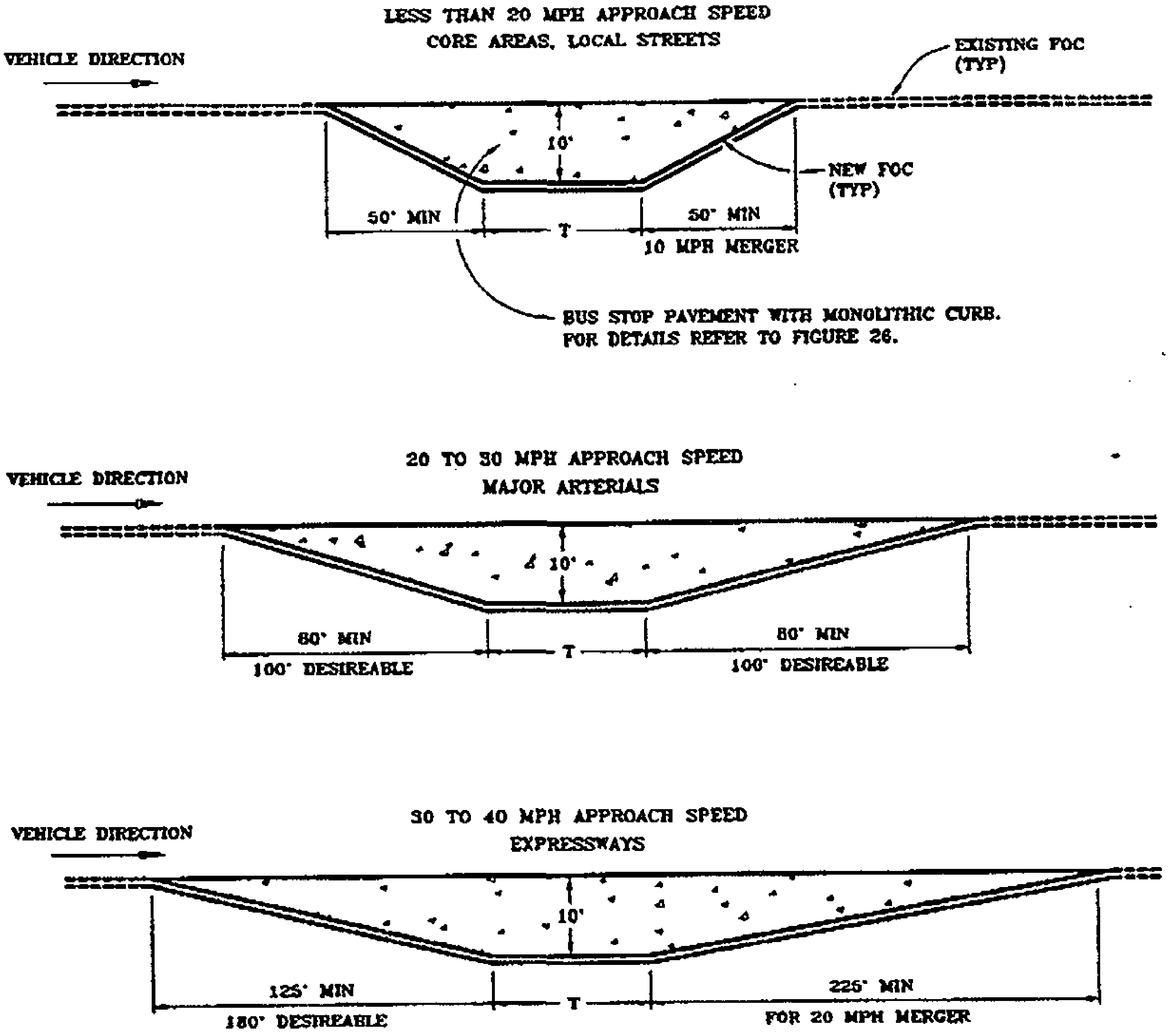
STUB UP DETAIL

SANTA CLARA VALLEY TRANSPORTATION AUTHORITY

BUS STOP CONFIGURATION

FIGURE 20

97-036



PLAN VIEW

NOTE:

T (TANGENT LENGTH) = 55' REQUIRED FOR ONE STANDARD BUS STOP AND 75' FOR ONE ARTICULATED BUS STOP.

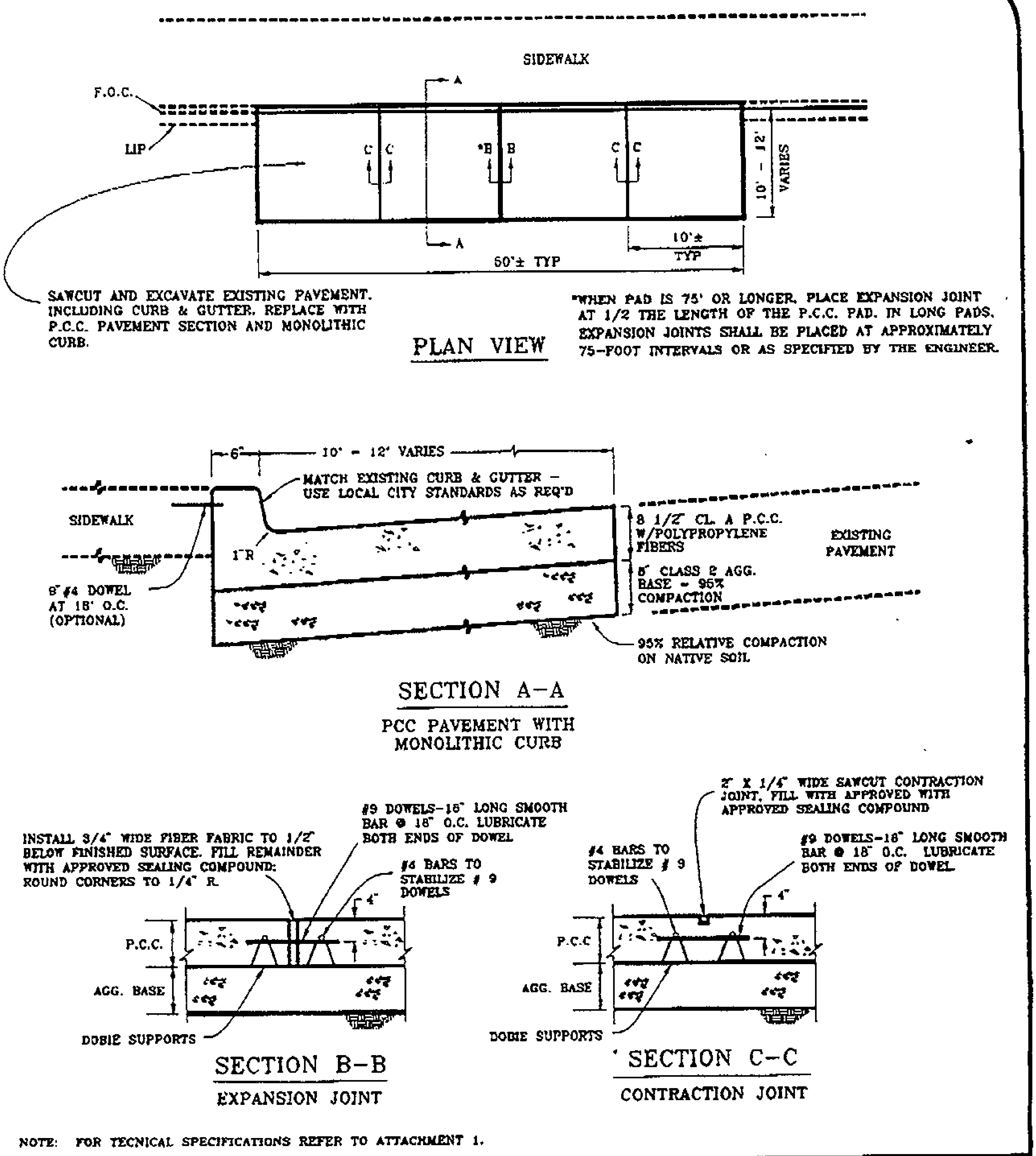
= T + 70' (X-1), WHERE X = # OF BUSES (USE AT MAJOR TRANSFER TERMINAL)

SANTA CLARA VALLEY TRANSPORTATION AUTHORITY

TYPICAL BUS DUCKOUT

FIGURE 22

97-036



SAWCUT AND EXCAVATE EXISTING PAVEMENT, INCLUDING CURB & GUTTER. REPLACE WITH P.C.C. PAVEMENT SECTION AND MONOLITHIC CURB.

*WHEN PAD IS 75' OR LONGER, PLACE EXPANSION JOINT AT 1/2 THE LENGTH OF THE P.C.C. PAD. IN LONG PADS, EXPANSION JOINTS SHALL BE PLACED AT APPROXIMATELY 75-FOOT INTERVALS OR AS SPECIFIED BY THE ENGINEER.

MATCH EXISTING CURB & GUTTER - USE LOCAL CITY STANDARDS AS REQ'D

9" #4 DOWEL AT 18" O.C. (OPTIONAL)

95% RELATIVE COMPACTION ON NATIVE SOIL

PCC PAVEMENT WITH MONOLITHIC CURB

INSTALL 3/4" WIDE FIBER FABRIC TO 1/2" BELOW FINISHED SURFACE. FILL REMAINDER WITH APPROVED SEALING COMPOUND; ROUND CORNERS TO 1/4" R.

#9 DOWELS-18" LONG SMOOTH BAR @ 18" O.C. LUBRICATE BOTH ENDS OF DOWEL

#4 BARS TO STABILIZE # 9 DOWELS

EXPANSION JOINT

2" X 1/4" WIDE SAWCUT CONTRACTION JOINT, FILL WITH APPROVED WITH APPROVED SEALING COMPOUND

#4 BARS TO STABILIZE # 9 DOWELS

#9 DOWELS-18" LONG SMOOTH BAR @ 18" O.C. LUBRICATE BOTH ENDS OF DOWEL

CONTRACTION JOINT

NOTE: FOR TECNICAL SPECIFICATIONS REFER TO ATTACHMENT 1.

SANTA CLARA VALLEY TRANSPORTATION AUTHORITY

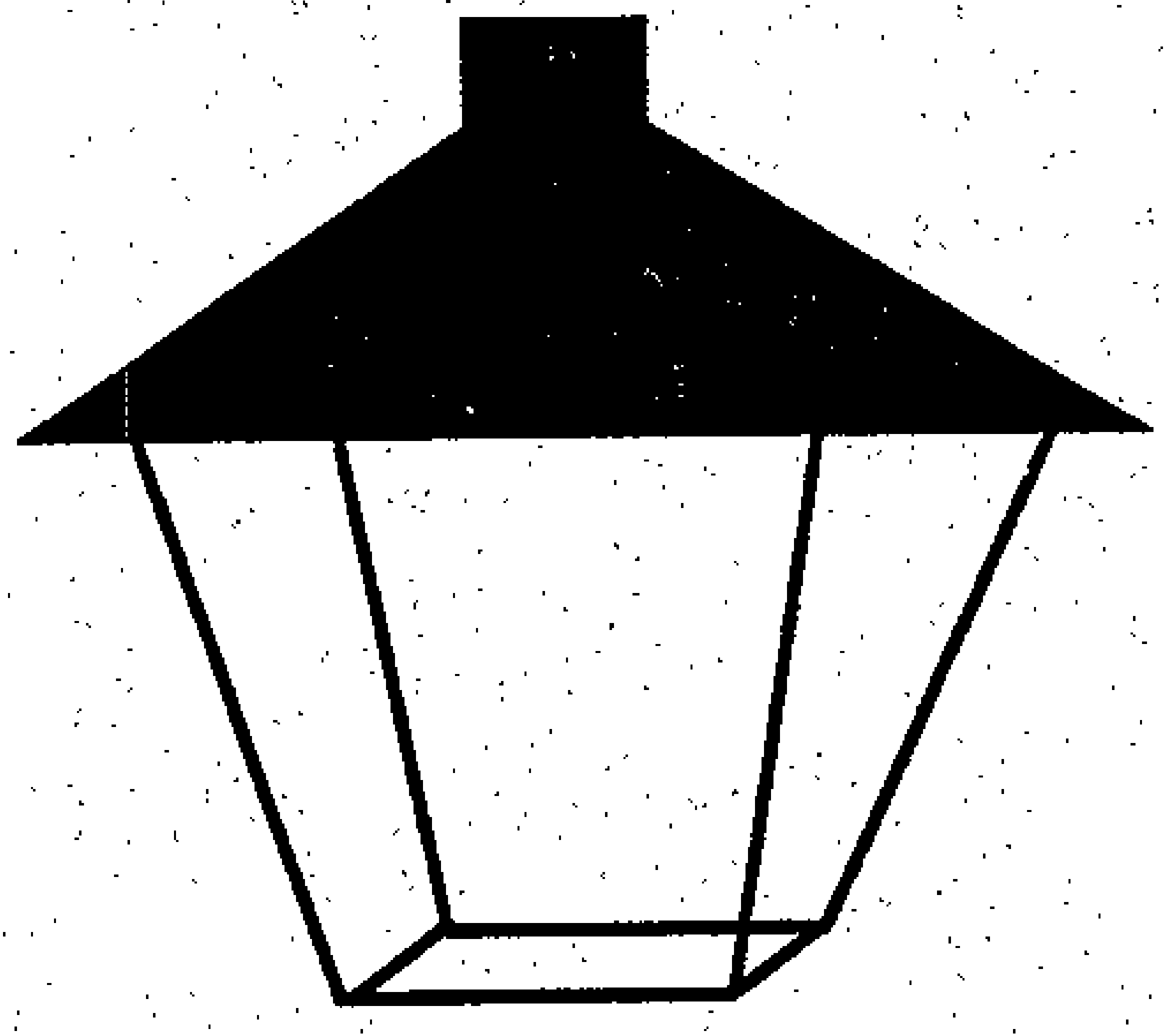
BUS STOP PAVEMENT DETAILS

FIGURE 26

FINAL

ENVIRONMENTAL IMPACT REPORT

TOWN AND COUNTRY VILLAGE



CITY OF SAN JOSE

JUNE 1998

97-036

VOLUME IV OF IV : FINAL EIR APPENDICES H-K

PDCSH97-06-036

APPENDIX H

FIRST AMENDMENT TO THE DRAFT ENVIRONMENTAL IMPACT REPORT

FIRST AMENDMENT

TO A

DRAFT ENVIRONMENTAL IMPACT REPORT

TOWN AND COUNTRY VILLAGE

CITY OF SAN JOSE

APRIL 1998

97-036

PREFACE

This document, together with the Draft Environmental Impact Report (DEIR) constitute the Final Environmental Impact Report (FEIR) for the Town and Country Village redevelopment project. The DEIR was circulated to affected public agencies and interested parties for a 45-day review period. This Amendment consists of comments received by the Lead Agency, the City of San Jose, on the DEIR, responses to those comments, and revisions to the text of the DEIR.

In conformance with the CEQA Guidelines, the FEIR provides objective information regarding the environmental consequences of the proposed project. The FEIR also examines mitigation measures and alternatives to the project intended to reduce or eliminate significant environmental impacts. The FEIR is used by the City and other Responsible Agencies in making decisions regarding the project. The CEQA Guidelines require that, while the information in the FEIR does not control the agency's ultimate discretion on the project, the agency must respond to each significant effect identified in the DEIR by making written findings for each of those effects. According to State Public Resources Code (§21090), no public agency shall approve or carry out a project for which an environmental impact report has been certified which identifies one or more significant effects on the environment that would occur if the project is approved or carried out unless both of the following occur:

(a) The public agency makes one or more of the following findings with respect to each significant effect:

(1) Changes or alterations have been required in, or incorporated into, the project which will mitigate or avoid the significant effects on the environment.

(2) Those changes or alterations are within the responsibility and jurisdiction of another public agency and have been, or can and should be, adopted by that other agency.

(3) Specific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities of highly trained workers, make infeasible the mitigation measures or alternatives identified in the environmental impact report.

(b) With respect to significant effects which were subject to a finding under paragraph (3) of subdivision (a), the public agency finds that specific overriding economic, legal, social, technological, or other benefits of the project outweigh the significant effects on the environment.

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I. LIST OF AGENCIES AND INDIVIDUALS RECEIVING THE DRAFT EIR

State and Regional Agencies

Director of Planning, County of Santa Clara
Santa Clara County, Roads and Airport Department
Audubon Society
Director of Planning, City of Campbell
Association of Bay Area Governments
Governor's Office of Planning and Research, State Clearinghouse
Director, California Department of Fish and Game
Santa Clara County, Parks & Recreation Department
Santa Clara Valley Water District
Director of Planning & Inspections, City of Santa Clara
San Francisco Bay Regional Water Quality Control Board
Transportation Planning, Caltrans District 4
Santa Clara Valley Transportation Authority
Sierra Club/Loma Prieta Chapter
Guadalupe-Coyote Resource Conservation District
Bay Area Air Quality Management District
Metropolitan Transportation Commission
Campbell Union School District

Individuals

Mark Cali
Robin Marshall
Janet Gawbill
Kerry Field
Peter Cassata
Karita Hummer
Don Ichikawa
Susan Lindshog
Rita Carr
Cisco Systems

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II. LIST OF AGENCIES AND INDIVIDUALS COMMENTING ON THE DRAFT EIR

Comment Received From	Date of Letter	Response Required
Federal and State Agencies		
A. State Department of Fish and Game	2/11/98	yes
B. Cal EPA	2/25/98	yes
C. State Department of Transportation	2/26/98	yes
Regional and Local Agencies		
D. County of Santa Clara, Parks and Recreation Department	1/27/98	yes
E. Campbell Union School District	1/29/98	yes
F. County of Santa Clara, Roads and Airports Department	2/5/98	yes
G. City of Santa Clara, Planning Division	2/20/98	yes
H. The Redevelopment Agency of the City of San Jose	2/25/98	yes
I. Santa Clara Valley Transportation Authority	2/25/98	yes
Organizations and Individuals		
J. Daphna Lee	2/7/98	yes
K. Petition to Slow the "Fast Track" Development of the New Town & Country Village	2/12/98	yes
L. Lucille J. Williams	2/23/98	yes
M. Ann Reid	2/23/98	yes
N. Petition letter	2/24/98	yes
O. Berliner Cohen	2/24/98	yes
P. San Jose Downtown Association	2/25/98	yes
Q. Abrams Associates*	2/23/98	yes

*Note: This letter was sent attached to the letter from the Downtown Association.

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III. RESPONSES TO COMMENTS RECEIVED ON THE DRAFT EIR

The following section includes all of the comments contained in letters received during the 45-day review period advertised by the City of San Jose regarding this DEIR. The comments are organized under headings containing the source of the letter and its date. The specific comments have been copied from the letters and are presented as "Comment" with its response directly following. Copies of these letters submitted to the City of San Jose are found in their entirety in Section V of this First Amendment to the DEIR.

FEDERAL AND STATE AGENCIES

A. DEPARTMENT OF FISH AND GAME, DATED FEBRUARY 25, 1998

COMMENT 1: On Page 85 of the Draft Environmental Impact Report (EIR), it is stated that "the vacant area does not meet the definition of what is considered by the State Department of Fish and Game to be the minimum amount of habitat to support one or a pair of burrowing owl (6.5 acres)." The Department has **never** made this assertion.

In our Staff Report of Burrowing Owl Mitigation (1995), we state that "a minimum of 6.5 acres of foraging habitat (calculated on a 100 m (approx. 300 ft) foraging radius around the burrow) per pair or unpaired resident bird should be acquired or permanently protected" (Staff Report 1995) as a mitigation requirement for project impacts to burrowing owls. This is not to say that we believe that burrowing owls may not be utilizing sites of smaller size (or of larger size). Due to the fragmented nature of the patches of burrowing owl habitat left in the South Bay area, it is likely burrowing owls utilize several small parcels of open space within their range.

RESPONSE: Language in the DEIR addressing the minimum amount of habitat that is necessary to support Burrowing Owls, and clarifying the project's impacts on both the habitat available to the species and potential impacts to individual birds is included in **Section IV. Revisions to the Text of the EIR** found in this Amendment.

As stated in the text revisions, and as reflected in these comments from Fish and Game, there is no widely accepted, scientific estimate as to what constitutes a minimum amount of habitat that will support one or more Burrowing Owls. When Owls must be relocated, the State Department of Fish and Game typically stipulates that a relocation site provide a minimum of six and one-half acres of habitat per bird or pair of birds. While Burrowing Owls have been found living in locations with less natural habitat available, there are no studies on whether such sub-optimal environments are conducive to successful breeding. The loss of 4.5 acres of marginal foraging habitat is not considered a significant loss of habitat impact; however, the EIR does conclude that, without mitigation there would be a significant impact from the project on individual owls, since owls intermittently live on the project site.

97-036

A. DEPARTMENT OF FISH AND GAME, DATED FEBRUARY 25, 1998, continued

COMMENT 2: On Page 85, it is stated that "the development of the project site will have no effect on the breeding success of the burrowing owl." There is not enough information available to make this kind of determination. One of the owls that was observed on the Town and Country site in October, 1997, was leg banded. It turns out that the bird hatched in a nest burrow on the Santa Clara University Campus in the spring of 1997. It is difficult to predict the habits of wild animals, however, we do know that owls have been observed on the Town and Country parcel in the past and we also know that burrowing owls prefer to breed in areas that other burrowing owls have bred in the past. Therefore, it is possible that the juvenile observed in October may attempt to nest on the site. If so, development of the site would effect the breeding success of the owls observed. We make this argument to illustrate that it is best to avoid making these types of sweeping generalizations when conducting impacts analysis on burrowing owls.

RESPONSE 2: As clarified in the text revisions found in Section IV. in this Amendment, the remaining habitat on the project site is poor quality and will deteriorate whether or not this project is approved. The habitat consists of a small patch of vacant ground in the center of a heavily urbanized area. The text revisions also clarify the distinction between potential impacts to the species and their breeding success in the area and the region, and potential impacts to the particular birds that may be still on the property. The loss of this vacant land will not, by itself, significantly impact the success of the species in San Jose or Santa Clara County, but does contribute to the cumulatively significant loss of habitat in the region (see Cumulative Impacts, page 118 of the DEIR).

COMMENT 3: The mitigation measures proposed for reducing impacts to burrowing owls to a level of less than significant (Page 86) are appropriate insofar as they assure there will be no "take" of individual burrowing owls. Pre-construction surveys should be conducted within thirty days of construction and any burrowing owls observed on the site during the nesting season (February 1 to August 31) shall be protected pursuant to sections 3503 and 3503.5 of the California Fish and Game Code and the Federal Migratory Bird Treaty Act. A 250-foot radius buffer will have to be established around any active owl burrow for the duration of the nesting season. No activities will be allowed within the protective buffer. The buffer shall be established with the placement of acceptable fencing.

Mitigation for the loss of burrowing owl foraging and potential breeding habitat should be required as a condition of approval for the project. To delay the determination of mitigation requirements for impacts to burrowing owl **habitat** would not be in accordance with the provisions of CEQA. On Page 86 it is written that, "if resident of breeding owls are located on the site during pre-construction surveys, a site-specific mitigation plan would be prepared." One of the purposes of CEQA is to provide the public with an opportunity to review and comment on the adequacy of various mitigation measures proposed to off-set the project's impacts. Habitat mitigation requirements should be clearly identified in the Final EIR. If the City were to develop an interim measure for burrowing owl habitat protection (until the Burrowing Owl Habitat Conservation Plan is implemented) this type of situation could be avoided.

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A. DEPARTMENT OF FISH AND GAME, DATED FEBRUARY 25, 1998, continued

We suggest assessing an impact fee on projects such as this, which contribute to the cumulative loss of burrowing owl habitat in the region. This approach would provide the applicant and the City with an acceptable and reasonable approach to burrowing owl habitat mitigation. The fee could be placed into an account which could later be used to fund management activities to enhance or create burrowing owl habitat on protected open space areas. We urge the City to consider this approach without delay so that the burden of protecting burrowing owls in the San Jose area is distributed fairly among developers. This approach will provide the applicant with a feasible way to lessen the significant impact of the project on burrowing owl habitat and afford the City with the opportunity to avoid making a finding of overriding considerations.

On Page 117 of the Draft EIR, this type of approach is clearly identified as a mitigation option. However, it is stated that "although the City of San Jose has begun a study .... there is currently no established program in place" for an applicant to contribute financially to burrowing owl habitat protection, enhancement and management. An interim measure, such as an ordinance which identifies a fee schedule based on the number of square feet of the project or the size of the owl habitat area impacted, would assure that all applicants are provided with a mitigation mechanism so that mitigation would be distributed fairly and that enough money will be available to fulfill the components of the future Burrowing Owl Habitat Conservation Plan. We would be pleased to provide you information about similar ordinances elsewhere that have been established to achieve similar goals.

If a fee assessment is not possible at this time, we recommend that impacts to burrowing owl habitat be offset with the protection of similar habitat elsewhere within the South Bay area. We suggest that a minimum mitigation ratio of 1:1 be applied to burrowing owl habitat impacts. The applicant should be required to protect and enhance five acres of burrowing owl habitat in the South Bay area. If the applicant is unable to find acceptable habitat within the time frame of the project permitting process, we would be willing to accept a security bond as an interim mitigation measure. The security bond would have to be in an amount sufficient to cover the potential cost of having the Department fulfill the mitigation requirement. A Mitigation Agreement with our Department will be required if this mitigation option is chosen.

RESPONSE 3: This comment assumes that the loss of habitat resulting for this project would be significant. The EIR does not conclude that the development of the remaining vacant land on the project site would be a significant loss of habitat, although it does contribute to the cumulatively significant loss of such habitat in the region. The text revisions in this Amendment (**Section IV. Revisions to the Text of the EIR**) clarify the distinction between impacts to birds and impacts to habitat, and explain why the loss of the remaining foraging habitat on this site is not considered significant. CEQA does not require mitigation for cumulative impacts when the project's contribution is considered *de minimus*.

The Department's suggestions regarding how to implement possible mitigation for cumulatively significant impacts are acknowledged, and will be considered by the City Council for inclusion as potential project conditions.

97-036

B. DEPARTMENT OF TOXIC SUBSTANCES CONTROL, DATED FEBRUARY 25, 1998

COMMENT 1: As stated in our August 11, 1997 letter to you, DTSC is a Responsible Agency under CEQA and had planned to use the Environmental Impact Report (EIR) prepared by the City of San Jose to address the potential environmental effects stemming from the cleanup actions specified in the Removal Action Workplan. (RAW). However, the since the City of San Jose failed to include DTSC, as a Responsible Agency, in the scoping sessions conducted early in the planning stages, the Draft EIR as proposed is not useful for the purposes of evaluating effects of the RAW. In fact, at this time the RAW is still in the draft stages and although there are a few potential remedies under consideration, a remedy for the soil contamination has not been selected. DTSC formally requests from the City of San Jose an extension of the public comment period in order to allow development of the RAW to the point that a remedy can be selected. At that point, the EIR could be modified to address the environmental effects of the RAW.

RESPONSE 1: No formal scoping meeting for Responsible Agencies was conducted for this project. The applicants' representatives, and consultants responsible for preparing the technical analysis reflected in the DEIR, have been in contact with DTSC since the circulation of the Notice of Preparation. The City believes the conditions found on the site are not uncommon, and the mitigation identified in the DEIR is adequate to address these issues. Implementation of a RAW for the type and amount of contamination found on the site, which is being developed in conjunction with DTSC, would not generate additional significant environmental effects which are not already addressed in the DEIR.

In addition, the mitigation measure identified on page 92 of the DEIR states, "once implemented, the RAW will reduce the levels of contamination within the areas designated for residential uses to acceptable threshold levels as established by local, state, and federal regulatory agencies."

COMMENT 2: If the City of San Jose will not extend the public review and comment period, please consider and respond appropriately to the comments contained in this letter. If the City of San Jose does not address these comments to the satisfaction of DTSC, an alternate CEQA document will be written to address the effects of the RAW exclusively. This course of action will result in higher costs (on the order of $15,000) to the project proponent, Federal Realty. Staff at DTSC are ready and willing to work closely with the City of San Jose to modify the EIR such that the wasteful exercise of generating another CEQA document can be avoided.

RESPONSE 2: Please refer to Response 1 of this letter. The City acknowledges that Section 15096(e) of the CEQA Guidelines states that if a Responsible Agency believes that a final EIR or Negative Declaration prepared by the Lead Agency is not adequate for use by the Responsible Agency, the Responsible Agency may prepare a subsequent EIR or assume lead Agency status.

97-036

B. DEPARTMENT OF TOXIC SUBSTANCES CONTROL, DATED FEBRUARY 25, 1998, continued

COMMENT 3: As stated in DTSC's August 11, 1997 letter, the EIR must account for potential impacts of the cleanup work on earthen structures, air quality, surface and ground water, animal and plant life, land use, natural resources, risk of upset, public resources, energy, utilities, noise, public health and safety, aesthetics, cultural and paleontological resources, traffic, population, housing, recreation, and cumulative effects.

RESPONSE 3: It is the City's understanding that one of the purposes of the development of a RAW is to include measures to ensure that the implementation of the workplan will not generate new significant effects, and that clean up is conducted in a safe and effective manner in accordance with local, state, and federal regulations. As reflected in the responses below, there is no reason to assume that the measures necessary to implement a RAW at this site would have significant impacts different or greater than those identified in the DEIR.

COMMENT 4: The Land Use section should discuss issues related to restricting land use if a deed restriction is put into place. Conceptually, the deed restriction would prevent uncontrolled excavation of contaminated soils. It would prevent uses that would involve sensitive receptors such as day care centers, hospitals, etc. The restriction would require a plan, approved by DTSC, that describes how contaminated soils will be handled in the future. Residential units may be constructed on deed restricted land, but ground-level private patios or yards must be free of contaminants at any depth.

RESPONSE 4 The DEIR identifies environmental impacts from the project as proposed. If DTSC concludes that a deed restriction is necessary, and if that restriction results in a development pattern substantially different than that reflected in the City's approved project design, the property owner would propose suitable revisions consistent with DTSC requirements. The City would consider the modified design and evaluate it for conformance with the approved PD zoning. If the modified proposal had environmental impacts different than those reflected in this EIR, subsequent review would be required under CEQA, including coordination with DTSC and other concerned agencies.

There is no proposal to locate a day care center, hospital, or other sensitive use on the site, as reflected in the Project Description in the DEIR.

COMMENT 5: The Traffic section should discuss issues related to the potential effects of implementing alternative #1, complete removal and disposal of contaminated soil. The estimated amount of soil that would require removal has not been determined. This alternative would involve hauling contaminated soil by truck to the nearest disposal facility. A disposal facility has not been proposed to DTSC and is not known at this time. The EIR should discuss the effects of the level of service due to the implementation of this remedy.

97 - 036

B. DEPARTMENT OF TOXIC SUBSTANCES CONTROL, DATED FEBRUARY 25, 1998, continued

RESPONSE 5: Even if all of the contaminated soil is removed from the site, the number of truck trips necessary to remove contaminated soil would be significantly less than the number of daily trips that will be generated by this project after development. Since the DEIR evaluates the impacts of full buildout of the project, traffic impacts of the RAW activities would not create significant impacts different or more significant than those addressed in the DEIR.

COMMENT 6: The Air Quality section should state that soil with high levels of arsenic, lead and pesticides exists on the site and should discuss the potential health effects. Indicate that DTSC would require a Health and Safety Plan as part of the RAW which would include monitoring and dust control measures.

This section should also discuss the potential negative impacts to air quality stemming from the use of construction equipment and from the use of trucks hauling contaminated soil for disposal.

RESPONSE 6: The DEIR assumed that DTSC, as stated in this comment, would require that the RAW include appropriate measures to reduce air quality impacts. As reflected in the response to the previous comment about traffic, implementation of the RAW will have fewer air quality impacts related to traffic than will full buildout of the project and, therefore, would not create significant impacts different or more significant than those addressed in the DEIR.

COMMENT 7: This section should discuss the appropriateness of fill material potentially being placed into areas that will be used for foundation support. This section should address changes in the site due to potential excavation of contaminated soils. This section should also discuss issues related to the remedial option of leaving contaminated soils in place. If contaminated soils are left in place, DTSC will require an Operations and Maintenance Plan for long term maintenance and Soils Management Plan for **any** disturbance of contaminated soil. These discussions should tie into the discussion in the Air section as they relate to dust control.

RESPONSE 7: As reflected in responses to previous comments, the DEIR states that the RAW will need to conform to DTSC requirements. If the soil were to remain on site, it would either be incorporated into building foundations, or would otherwise be treated in a fashion that would conform to relevant State and Federal standards.

COMMENT 8: The discussion of sample results in the "Former Agricultural Uses" section is inaccurate. Perhaps the author was confused by the presentation in the Environmental Site Assessment, which presented sampling data in a chronological fashion. Environmental sampling data should be presented in total, i.e., regardless of the time sampled. There were at least 76 soil samples analyzed. Present the total number of samples analyzed for pesticides, lead, and arsenic. Present the correct concentrations as a range from minimum to maximum. This data should be supported by copies of figures presented in the Environmental Site Assessment which show both concentration and location of samples.

RESPONSE 8: The soil sampling information summarized in the DEIR document is based upon the most recent environmental site assessment prepared on the project site. CEQA Guidelines and recent case law direct the analysis in an EIR to evaluate the conditions which exist on the site before the commencement of the project. The information in the DEIR is the most up-to-date available for the project site. In addition, the DEIR contains a reference to previous soil sampling conducted on the site. The text of the EIR has been revised to clarify the ranges in pesticides found in the most recent soil samples and the comparison to previous soil samples. These revisions are included in **Section IV. Revisions to the Text of the Draft EIR** of this document.

Support material for technical information contained in an EIR is frequently included in the Appendices which are also part of the EIR. Figures identifying the location of the soil samples and the concentrations of the materials are found in Appendix E of the DEIR. Page 88 of the DEIR refers the reader of the document to the technical report located in the Appendix.

COMMENT 9: The comparison of site concentrations to the total threshold limit concentration (TTLC) and resulting determination of whether the soil is hazardous material leads the reader to believe that any concentration below the TTLC is not hazardous and therefore does not present a human health risk. While the containment concentration may be below the TTLC, it still may present a significant health risk and by virtue of being toxic is defined as hazardous material. The Site Concentrations should be compared to site-specific background soil concentrations or Preliminary Remedial Goals (PRGS) developed by the U.S. EPA. PRGs are conservative screening concentrations that provide a good benchmark for comparison to potential human health risks.

RESPONSE 9: Total threshold limit concentrations (TTLC) are used by the State of California to define hazardous waste. The text of the DEIR states that the soil would be classified as a hazardous material. The text revisions in this Amendment (**Section IV. Revisions to the Text of the Draft EIR**) clarify the classification of the contaminated soils. A Human Health Screening Evaluation is summarized on page 91 of the DEIR.

COMMENT 10: The EIR presents arsenic concentrations in the "Former Agricultural Uses" section. This is not appropriate, because it leads the reader to believe that arsenic is limited to the currently unpaved area. DTSC believes that the entire area encompassed by the site was once used for agricultural purposes. As the figures in the Environmental Site Assessment show, arsenic was detected in soil at several locations at the site.

B. DEPARTMENT OF TOXIC SUBSTANCES CONTROL, DATED FEBRUARY 25, 1998, continued

Page 92, Mitigation for Hazardous Material Impacts: This section refers to the "former agricultural area." As previously stated, DTSC believes that the entire site was once used for agricultural purposes.

RESPONSE 10: The entire project site was previously used for agricultural purposes. The "Former Agricultural Uses" section of the DEIR does not limit previous agricultural operations only to the existing vacant parcel. The text revisions in this Amendment (**Section IV. Revisions to the Text of the Draft EIR**) clarify the reference to the former agricultural area to include the entire site.

COMMENT 11: This section refers to the RAW as a mitigation measure. The EIR should address the effects of the RAW (in both implementation and final result). It is unclear how the EIR can address these effects when the RAW has not been developed yet.

RESPONSE 11: As stated in previous comments and responses to them, both the City of San Jose and State law assume that the RAW will include measures to reduce impacts from the contamination on site to a less than significant level. Preparation and conformance with a RAW is, therefore, mitigation for impacts from the contamination. Based on the amount and type of contamination identified as present on this site, it is unlikely that implementation of the RAW itself would have significant adverse impacts different or more significant than those addressed in the DEIR.

COMMENT 12: This section should address the potential effects of the usage of fuel for trucking contaminated soil to a disposal facility.

RESPONSE 12: If the contaminated soil must be removed from the site to a disposal facility, no more than approximately 35 truck trips would be required. The City of San Jose would not consider the fuel necessary to remove the contaminated soil to be "inefficient and unnecessary consumptions of energy" and its consumption is, therefore, not considered a significant impact, requiring mitigation under the CEQA Guidelines [Section 15126(c)].

COMMENT 13: There should be a section addressing the risk of upset. This section would examine the potential effects from an accident during or after implementation of the selected alternative in the RAW. The Health and Safety Plan, Operations and Maintenance Plan and Soils Management Plan required by DTSC would make these impacts less than significant.

RESPONSE 13: The implementation of the RAW to remove or move soil in accordance with DTSC standards, which include the development of a Health and Safety Plan,

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B. DEPARTMENT OF TOXIC SUBSTANCES CONTROL, DATED FEBRUARY 25, 1998, continued

Operations and Maintenance Plan, and Soils Management Plan is not anticipated to generate additional significant effects associated with risk of upset.

COMMENT 14: This section should analyze the relative impacts associated with the main areas of contamination and how the various hazardous materials may, when considered together, result in an adverse impact at and around the project site. This includes similar hazardous material removal projects in proximity to the site. The cumulative analysis as currently written limits the focus primarily to traffic impacts and its cumulative effects.

RESPONSE 14: Singularly or collectively the hazardous materials found on the site do not result in significant impacts with the identified mitigation. The City knows of no approved or reasonably foreseeable future projects which, considered in conjunction with the proposed project, would result in cumulatively significant hazardous materials impacts.

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C. STATE DEPARTMENT OF TRANSPORTATION, DATED FEBRUARY 26, 1998

COMMENT 1: Modifications to the existing ramp metering systems, such as ramp widening, may be necessary in order to mitigate the impacts the project. In particular, at the one-lane diagonal on-ramp from Stevens Creek Boulevard to the southbound I-880, the existing ramp meter is located on the lane collector road. The traffic generated by this project will add to the existing queue at the diagonal on-ramp in the afternoon peak period, it appears that a three-lane on-ramp, including an HOV bypass lane will be required.

RESPONSE 1: The EIR identifies mitigation necessary to offset project impacts, but does not address improvements to better accommodate existing and/or background traffic. Widening the diagonal ramp to SB I-880/I-280 from Stevens Creek Boulevard to two lanes, from Monroe to the I-280 interchange, will mitigate impacts from the proposed project. This improvement would also be compatible with Caltrans' plan for three lanes with an HOV bypass on that ramp. As a condition of the project, the two-lane ramp will be required. This ramp improvement goes a long way toward achieving the ultimate design that Caltrans desires; however, Caltrans may wish to build the ultimate design all at once, as opposed to widening the ramp to two lanes, then at some future date widening it to three. If that is the case, the City would recommend that Caltrans coordinate with the developers of the project and the City Department of Public Works to achieve this end.

COMMENT 2: In Volume I, page 32 land Vol. II, Page 14, the report states "the assumed ramp capacity is 2,000 vehicle per hour per lane for the diagonal ramps and 1,800 vehicle per hour per lane for the loop ramps". The LOS of ramps was calculated using V/C ratio alone without any consideration for ramp metering. Please revise the analysis of impacts to freeway segments, interchange ramps and intersections to include the effects of ramp metering on peak period traffic.

RESPONSE 2: Based on the traffic analysis by Barton-Aschman, the project could potentially add traffic to the following metered ramps: I-880 northbound ramp from Stevens Creek (metered in mornings only), I-880 southbound onramp from Stevens Creek (metered in the afternoons only), and I-280 northbound onramp from Winchester Boulevard (metered in the morning and afternoon). A ramp metering analysis has been conducted and shows no adverse impact due to the project. The results of observations, and the project impact, are presented on the table below. The only location where traffic exceeded the storage capacity was at the I-280 onramp from Winchester in the morning. The project would add only four trips to this ramp during the AM peak hour, which represents an insignificant impact. The other ramps are expected to remain within their available storage capacity.

C. STATE DEPARTMENT OF TRANSPORTATION, DATED FEBRUARY 26, 1998, continued

Ramp Metering Summary

Ramp	Time Period	Maximum Storage (cars)	Maximum Queue (cars)[a]	Added by Background (cars)[b]	Added by Project (cars)[b]	Total Queue (cars)
San Carlos to NB 880	AM	50	14	0	0	14
Stevens Creek to NB 880	AM	45	28	2	5	35
Stevens Creek to SB 880	PM	55	16	5	3	24
Winchester to NB 280	AM	58	58+	0	4	58+
Winchester to NB 280	PM	58	53	1	3	57

[a] Count conducted on Wed. 1/21/98

[b] Cars added to maximum queue calculated by taking average arrival rate per minute and multiplying by two.

COMMENT 3: The Existing Level of Service (LOS) was calculated using V/C ratio. The ratio alone is not sufficient to provide correct traffic conditions. Peak hour speeds also must be looked at before true LOS could be calculated. For instance, upstream of any bottleneck, traffic volumes are lower than the capacity due to stored vehicles. Therefore, relying on volumes alone will not provide true traffic conditions because it will show much higher LOS.

RESPONSE 3: The freeway analysis in the DEIR was conducted using the methodology specified by both the City of San Jose and Santa Clara Valley Transportation Authority (VTA) for traffic studies. These guidelines specify the use of a V/C ratio for the analysis of freeway segments. In addition, the V/C analysis shows LOS F on several freeway segments and indicates that the project would have a significant impact on those segments. The EIR concludes that the project will have a significant unavoidable impact on six freeway segments.

COMMENT 4: In addition, weaving affects are ignored. For instance the northbound Collector Distributor Road on I-880 between I-280 and Stevens Creek Boulevard is currently experiencing daily congestion with LOS F due to traffic weave. This information is not reflected in Table 7. Projects that will increase traffic demand in this project will undoubtedly worsen that weave and therefore must be addressed in the environmental document.

RESPONSE 4: Barton-Aschman conducted traffic counts and analyzed the weave sections on the collector-distributor roads of the I-880/Stevens Creek Boulevard/I-280 interchange. These counts were conducted on Saturday (1/17/98) and Tuesday (1/20/98). A weaving analysis was done using the methodology described in the *Highway Capacity Manual.* The standard weaving methodology is designed to analyze freeway sections where the free flow speed is 65-miles per hour. The weaving sections analyzed are on the collector-distributor roads, where free flow speeds are much lower. Three weave sections were analyzed: 1) northbound 280 off-ramp to northbound 880/northbound 880 to San Carlos, 2) Stevens Creek on-ramp to northbound 880/280 to Stevens Creek westbound off-ramp, and 3) Stevens Creek on-ramp to southbound 880/280. Weave sections numbers 1 and 3 are assumed to have a free flow speed of between 35 and 45 miles per hour since they are fed by diagonal ramps. Weave section number 2 is more restricted because it has loop ramps at either end. It is assumed to have a free flow speed of between 25 and 35 miles per hour. The levels of service by speed for these two conditions is on the following table.

The results of the weave section analysis show that all weave sections are estimated to operate at LOS D or better for all scenarios (including the project scenario). Therefore, the project would not have a significant impact on weave section operations. Nevertheless, it has been noticed that back-ups sometimes occur (not daily) in the weave sections of northbound 880 during the PM peak and on Saturday. These back-ups are caused by congestion on Stevens Creek and not by any inherent deficiency in the weave sections or the ramps. In particular, the intersection of Stevens Creek and Monroe causes back-ups in the westbound direction on Stevens Creek that extend beyond the interchange. The Draft EIR states that the project would have a significant impact on the Stevens Creek/Monroe intersection and identifies mitigation to eliminate this impact.

Weave Analysis Summary

Weekday PM Peak Hour

	Existing			**Background**			**Cumulative**		
Weave Section	**Sw**	**Snw**	**LOS**	**Sw**	**Snw**	**LOS**	**Sw**	**Snw**	**LOS**
East of I-880	34	36	B	33	35	B	32	34	B
I-880/Stvns. Crk. Int. (east)	25	24	B	25	23	B	23	22	C
West of I-880	40	43	A	39	42	A	38	40	A

Saturday Peak Hour

	Existing			**Background**			**Cumulative**		
Weave Section	**Sw**	**Snw**	**LOS**	**Sw**	**Snw**	**LOS**	**Sw**	**Snw**	**LOS**
East of I-880	33	35	B	32	34	B	31	32	B
I-880/Stvns. Crk. Int. (east)	23	22	C	23	21	C	22	20	C
West of I-880	40	44	A	39	42	A	39	42	A

Sw = Average running speed of weaving vehicles, mph

Snw = Average running speed of non-weaving vehicles, mph

Note: Methodology based on 1994 HCM

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